Building control: its development and application 1840-1936

Thesis

BUILDING CONTROL -
ITS DEVELOPMENT AND APPLICATION
1840-1936

UNRESTRICTED

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ABSTRACT

The thesis investigates the origin of building control in England and Wales (excluding London) and proceeds to trace the evolution of the system through the various Acts of Parliament and building byelaws. The growth of control is examined and the problems of administration and enforcement are discussed. The thesis tends to concentrate on the social and political issues that surrounded the growth of control, although reference is made to the technological problems of defining standards, restriction of innovation and economics.

Much of the thesis concerns the parliamentary battles between the sanitary reformers and speculative developers, the implications of which resulted in a growing intervention by Central Authority at the expense of Local Authority control, who remained responsible for administration of building control within their respective areas. The enquiries into the law and its enforcement are considered and the findings tend to show that control by government circular is no substitute for up dating the law, which was eventually achieved in the Public Health Act of 1936.

The need for building standards, defined by law, to reflect technological innovation and be capable of easy enforcement is shown together with the need to ensure that those standards are enforced uniformly by Local Authorities who appoint persons having professional competence comparable to that of designers and builders.

Bye laws founded on traditional building materials and methods were primarily introduced to improve the construction of low cost housing. The extension of building control to industrial and public buildings and the specific ways in which byelaws were structured showed that technological innovation and development were often hindered until a more scientific approach was adopted. But despite this disadvantage the aims of the byelaws were generally met.

The thesis shows that there are considerable benefits to society in having controls on buildings in that standards defined by law can result in improved environmental and social conditions, economies of standardisation and uniformity of installation. But these benefits can be eroded by the profits of speculation and avoidance, indifferent administration or enforcement and lack of professional standards of surveyors.

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LIST OF ABBREVIATIONS

B.B.	Building byelaws
B.R.D.	Building Research Department
B.R.S.	Building Research Station
B.S.I.	Building Standards Institute
D.S.I.R.	Department of Scientific and Industrial Research
H.C.	House of Commons
H.L.	House of Lords
I.A.A.S.	Incorporated Association of Architects and Surveyors
I.Mun.E.	Institution of Municipal Engineers
L.G.B.	Local Government Board
L.G.O.	Local Government Office
M.H.	Ministry of Health
M.O.H.	Medical Officer of Health
P.P.	Parliamentary Paper
R.C.	Reinforced concrete
R.I.B.A.	Royal Institution of British Architects
R.I.C.S.	Royal Institution of Chartered Surveyors
R.D.C.	Rural District Council
R.D.C.A.	Rural District Council Association
U.D.C.	Urban District Council
U.D.C.A.	Urban District Council Association
N.F.B.T.E.	National Federation of Building Trades Employers

LIST OF ILLUSTRATIONS

Acknowledgements

Kenneth Hunt, F.L.A., Area Librarian, Devon County Council, for his valuable assistance in obtaining relevant literature.

The Staff of the Libraries of the Department of the Environment, House of Lords, Royal Institution of Chartered Surveyors, and the Incorporated Association of Architects and Surveyors.

Arthur Curtis, F.I.B.C.O., Chief Building Control Officer, City of Exeter Council and Dennis Mosely, F.I.A.S., F.I.B.C.O., Assistant Director of Planning (Building Control), City of Bath Council, for their valuable assistance in locating and obtaining public Acts, local Acts, building byelaws and records in respect of building development within the Cities of Exeter and Bath.

George Baxter, M.I.A.S., Senior Building Control Officer, City of Leeds Council, for his valuable assistance on information relating to back-to-back housing in Leeds.

STATEMENT

During the preparation of this thesis the Incorporated Association of Architects and Surveyors became aware of my work and requested that I present a paper at their Annual Conference at Bournemouth in October 1982. Parts of the thesis were used as a basis for that paper entitled "Historical Aspects of Building Control".

INTRODUCTION

The control of building construction, in the interests of public health and safety has not received much attention by research into its evolution, development, problems and achievements. This thesis is an attempt to enquire into this area of public administration, its development and the socio-technological implications of this form of control. Little has been written on this subject, as it applies to England and Wales, although Pitt and Knowles have produced a good survey of the London system of building control which mainly centres around the work of the District Surveyor [1].

The system in England and Wales developed later than the London system and it is desirable to establish the origins, influences, the role of national and local government, and the demands of society in the development of the law. The year 1840 has been chosen as a starting point as during that year the first Parliamentary moves were made to obtain a Building Act for England and Wales, although comment will be made on the origins of control outside London with the introduction of a Building Act for Bristol in 1788 and Liverpool in 1825. 1936 was chosen to end the period of study as the Public Health Act of that year required all Local Authorities to make Building byelaws. That Act provided the basis on which the majority of present day building control laws are based.

A detailed study could not begin until it had been established what had occurred during this period. Very few previous studies on the subject of building control exist and the main sources for the thesis are primary material such as Parliamentary papers. These along with journals and standards have been consulted at the library of Exeter University, whilst secondary material was obtained through the library service of the Devon

County Council. As the study developed additional material was found in the libraries of the Department of the Environment, the House of Lords and the Royal Institution of Chartered Surveyors in London, the Library of the Incorporated Association of Architects and Surveyors in Northampton. Visits were paid to the cities of Leeds, Bath, Exeter and the town of Barnstaple to relate to local issues. Other material is taken from "The Builder" and "The Times". A full list of reference material is given in the Bibliography at the end of the thesis.

The Parliamentary papers have provided the structure on which the thesis is based and with which local issues interact. Arguments about some of the points raised are supported by comments extracted from the books referred to. Some of the reference material has been more related to the developments and social aspects of Local Government, Housing and Public Health and therefore limited in its contributions to building control. Local material is often poorly referenced and sometimes not available, making research into local issues difficult.

Building control is one of the oldest forms of local government responsibility from which has developed the provision of public housing, construction of streets, public drainage and town and country planning. All provide many avenues to explore, but the thesis will not include byelaws relating to streets as these were not specifically related to buildings. Nevertheless they did provide space between buildings which had the effect of restricting the spread of fire and offering light and air to buildings. Public Health laws relating to drainage, means of escape in case of fire, and to dangerous buildings, have been included as these are matters of public safety encompassed within the normal building control responsibilities of a Local Authority.

The thesis will show that broadly applied, building regulations and

byelaws did provide the control necessary to raise the standard of construction in the interests of health and safety, especially in the building of houses. These aims were achieved partly because the byelaws were of a preventive nature restricting bad construction and ensuring a minimum standard. The specific terms in which byelaws were framed resulted in minimum sizes and particular materials being specified. This frequently restricted innovation within the industry and invariably resulted in increased construction costs. A more flexible byelaw was required, one in which a more varied specification could be acceptable without affecting the overall aim of the byelaw. This was not to happen during this period and the industry had to wait until 1985. (2)

The rate of progress in achieving the aims of building control varied considerably. The administration of the law and particularly of byelaws was very weak. Because byelaws were of a specific nature a low level of skill was employed in their enforcement; the combination of the two provoked and agitated builders into opposition. The flexibility sought by builders required a functional form of byelaws and a more professional approach by Local Authorities. This was likely to increase the cost of administration which was not welcomed by many Local Authorities. This area of conflict did not apply to London which had a separate system financed partly through the fee system, and by the Surveyors having private practices. More regard should have been paid to this form of administration, rather than increasing political and administrative control.

Local Authorities produced varying standards of control and achievement. The discretion given to Authorities produced unevenness of control whereby some acted responsibly and others did not. This indifferent attitude resulted in Government increasing the bureaucracy of

control and introducing conflict between national and local issues. The manner by which Central Government became involved in local issues was a mistake. The approach should have been the removal of Local Authority discretion, the imposition of a statutory duty and the provision of comprehensive sound enforcement law.

One thread that runs continously through the thesis incorporating all these conflicts is the balance of interests needed to produce a house for the working classes which not only provides acceptable accommodation in terms of health and safety, but is within the economics of profitable construction and renting. It is in the provision of low cost housing that the greatest conflict on these issues took place. Chapter One of the thesis sets out to trace the origins and examine the factors that influenced the development of a building control system in England and Wales. Chapters Two and Three examine the role of the public health movement and the way it affected the growth and pattern of building control, leading to the introduction of building byelaws as a means of controlling building. How this system developed and the opposition which grew with it will be examined in Chapters Four and Five, whilst Chapters Six and Seven will explore the interaction between central and local government, the difficulties of achieving uniformity without legislation, the growth of professional involvement and consideration both of the law and the system.

During the period of this research, R.A. Harper, M.A., Dip. Arch., A.R.I.B.A. was undertaking research into the evolution of the English Building Regulations. His work was primarily concerned with the actual technical regulations, the way they grew and changed, what prompted them, how their standards were set and how they worked in practice. The period of this research was between 1840 and 1914 [3]. Harper's thesis is

unpublished but he has used his work to publish a book on Victorian Building Regulations [4] in which he briefly describes their evolution and proceeds to detail and illustrate their requirements and changing patern. S. Martin Gaskell has also used Harper's work as the basis of a book on building control which deals with national legislation and the introduction of local byelaws in Victorian England [5] in which he examines the evolution and establishment of building byelaws as a means of controlling building and urban development during the period 1840-1880. My thesis touches on this subject but expands into the problem area of control and examines the solutions developed in response to social and technological change. The period is from 1840-1936, which includes the investigation of the Departmental Committee on Building Byelaws and the introduction of its recommendations. This resulted in greater central control (every Local Authority having building byelaws) and a more professional approach to the making and enforcement of standards beneficial to public health and safety. A more interesting period on which to base such a study.

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4. HARPER R.H. - VICTORIAN BUILDING REGULATIONS, SUMMARY TABLES OF THE PRINCIPAL ENGLISH BUILDING ACTS AND MODEL BYE LAWS 1840-1914, London, 1985.

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CHRONOLOGY

CHAPTER	YEAR	EVENT	P.M.	GOVERNMENT
1	Pre 1840	London Building Act 1667 London Building Act 1772 London Building Act 1774 Bristol Building Act 1778 Liverpool Building Act 1825		
	1840	Bristol Building Act Report of Select Committee on Health of Towns Building Regulation Bill Building Regulation Bills	Viscount Melbourne	Whigs
2	1842 1845 1846 1847	Report on the Labouring Population of Great Britain (Chadwicks Report) Liverpool Building Act Health of Towns Commission Report Metropolitan Building Act Liverpool Sanitary Act Town Improvement Clauses Act Bristol Building Act Public Health Act	Sir Robert Peel	Tory
			Lord John Russell	Whigs
3	1854 1855 1858 1859	Public Health Act Metropolitan Management Act Public Health Act Local Government Act Public Health Act	1852 Earl of Derby	Tory
			Earl of Aberdeen (Peelite)	Peelite Whig Coalition
			Viscount Palmerston	Liberal
			Earl of Derby	Conservative
4	1866 1869 1871 1872 1874 1875	Public Health Act Stockton Improvement Act St Helens Improvement Act Report of the Royal Sanitary Commission Local Government Board Act Public Health Act Sanitary Laws (Amendment) Act Public Health Act	Earl of Derby Disraeli	Conservative
			1868 W Gladstone	Liberal
			Disraeli	Conservative
5	1885 1888 1890 1894 1901 1905 1906 1907	Report of the Royal Commission on Housing Local Government Act Public Health (Amendment) Act Local Governemtn Act Factories and Workshops Act Public Health (Amendment) Bill Public Health (Building By-Laws Bill Public Health (Amendment)Act	Marquis of Salisbury	Conservative
			W Gladstone	Liberal
			Earl of Rosebury	
			Sir Henry Campbell-Bannerman	

CHRONOLOGY

CHAPTER	YEAR	EVENT	PM	GOVERNMENT
5	1909	Housing & Town Planning Act	M H Asquith	Liberal
	1911	Housing of Working Classes Bill		
	1912	Housing of Working Classes Bill		
	1913	Housing of Working Classes Bill		
	1914	Housing of Working Classes Bill		
6	1918	Report of the Departmental Committee on Building By-Laws	D Lloyd-George	Coalition
	1918	Report of the Housing (Bldg (Const) Committee (Tudor Walters Reports)		
	1919	Housing and Town Planning Act		
	1923	Housing Act Report of the Commission on Fire Brigades and Fire Prevention	A Bonar-Law S Baldwin	Conservative
	1925	Housing Act	D Baldwin	Conservative
	1930	Public Health Act Building (Escape from Fire) Bill		
7	1933	First Report of Local Government & Public Health Consolidation Committee	K Ramsey MacDonald	National
		Local Government Act		
	1936	Second Report of Local Government & Public Health Consolidation Committee Public Health Act	S Baldwin	

CHAPTER 1

THE BUILDING REGULATION BILL (1841/2)

ANTECEDENTS AND FAILURE

In 1840 a move was made to introduce building regulations to control the construction of buildings in the interest of public health and safety. This was the first attempt to encourage a building control system in the United Kingdom and in this chapter we shall trace the origins and examine the influences that sought legislation as a means of regulating the construction of buildings.

London Building Act 1667-1774

Control over the construction of buildings in the interest of public health and safety is not of recent origin; indeed attempts to control the activities of builders can be traced back to ancient times[1]. In England and Wales it was the fear of loss of life and property due to fire that awakened the need to control the construction of buildings. Already in the 12th century an ordnance requiring the construction of stone party walls in new buildings to restrict the spread of fire had been made and this requirement later applied to external walls [2]. Many business people thereafter constructed their properties with stone walls and tile or slate roofs to protect their stocks from fire, but there were still many older timber framed buildings in close proximity and it was not until the Great Fire of London in 1666, which destroyed nearly four-fifths of the City, that an Act was introduced to control the construction of new buildings in London [3]. The Act required all external walls to be of brick or stone and introduced rules on

foundations, wall thicknesses, timber and timber sizes and new chimneys. The rules gave closer attention to the problem of fire and in this respect they required roofs, window frames and cellar floors to be made of oak which does not burn as rapidly as soft wood. The party walls were required to protrude above the roof surface to form a small parapet to restrict the spread of fire from one house to another, and on larger houses external balconies had to be constructed to enable ease of rescue for those who became trapped by fire. One important feature of the Act was the provision to appoint Surveyors to see that the requirements of the Act were carried out and these enforcement powers were strengthened by the imposition of fines on persons contravening the requirements. The Act brought about some degree of standardisation, the requirement for minimum room height resulted in an even height to terraced housing and the rules for thickness of walls with defined widths of piers between windows provided not only a structurally sound wall, but a balanced fenestration (see fig. 1). This type of house became not only popular with builders, who could estimate costs and contract much easier, but with owners who found that a fire proof house could also be an attractive house.

The design was often copied and erected in towns outside London using the same rules as stated in the London Act, even though the towns in which they were built did not have such comprehensive laws [4]. The Act of 1667 remained in force until it was replaced by further Acts in 1772 relating to party wall construction [5] and a more important Act of 1774 which provided a comprehensive approach to the classification of buildings, their size, location and fire resisting construction. Principles of compartmentation and isolation began to emerge but important aspects such as drainage and ventilation were not included [6].

Fig. 1

Terrace of early nineteenth century town houses built in the Georgian style - now mainly used as offices at Southernhay, Exeter, Devon.
The regularity of structural fenestration was brought about by following a set of rules - an early form of standardisation that was economical, socially and architecturally attractive.

Again surveyors were to be appointed to administer the provisions of this Act. The need for enforcement had been recognised as essential if the provisions were to have any effect, a lesson which had been learnt from the poor enforcement of the 1667 Act.

Nevertheless, despite its building control system, London did not escape the ravages of cholera, typhoid, tuberculosis, and other diseases caused by insanitary conditions in the nineteenth century, neither did it escape from the industrial and commercial pressures stemming from the Industrial Revolution. As a result, the provisions of the 1774 Act were found lacking in detail, especially in the areas of drainage and sanitary facilities to buildings, ventilation and damp proofing. Furthermore the Act was not able to control the standard of building in areas abutting the Cities of London and Westminster which would be greatly affected by an expanding metropolis. Despite the problems which emerged from administration of the 1774 Act, the experience of trying to establish a set of Building Regulations was valuable in later efforts to extend Building Acts to the rest of the country.

The London Building Acts were the first in Britain to show how a Town or City Council could obtain and administer legislation that would control the construction of buildings within a City in the interests of safety and public health. National legislation did not exist and any other Town Council which considered that its town was threatened with the ravages of fire would also have to obtain a local act giving them similar controls.

Serious fires occurred in the towns of Northampton, Warwick, Tiverton, Blandford, Wareham and Chudleigh where the extensive use of thatch as a roofing material encouraged the rapid spread of fire. The local Acts obtained by these towns were not in any way as extensive as

the London Acts, being limited to banning the use of timber and thatch in the re-roofing works and instead requiring the use of lead, slate or tile[7]. This practice was used in Calais, France, following an English regulation made under the Calais Paving Act of 1548 [8], but the principle of using legislation in England to control the construction of buildings in the interests of public safety was being established as accepted practice.

The Bristol Building Acts 1788-1840

The first city outside London to seek and obtain an Act for regulating buildings and party walls was the City of Bristol, a town which was also concerned with the effects of fire [9]. Bristol, a busy port which expanded through trade and commerce, also harboured many timber framed buildings. Whilst the main market streets were up to 50 feet wide and many others 35 feet wide or more, the less important streets, lanes and alleys were only 8 or 9 feet wide and some were only 6 feet wide, inadequate to resist the spread of fire between buildings. Serious fires had occurred in many towns in Southern England as we have seen above and much of the rebuilding was carried out in brickwork using the London Act 1667 as a guide [10]. Rather than allowing builders freedom of choice of materials in construction, the Council of Bristol in 1788 sought to impose standards by means of a Building Act. The Act of 1788 was concerned in the first place with fire prevention (see fig. 2). It comprised 39 sections (see Appendix 1) and was limited to the construction and alignment of external and party walls and chimneys, which were required to be of brick or stone and perpendicular - which prevented the construction of jettied upper floor levels (see fig 3). The

Fig. 2

ANNO VICESIMO OCTAVO

Georgii III. Regis.

CAP. LXVI.

An Act for regulating Buildings and Party Walls, within the City of *Briſtol*, and the Liberties thereof.

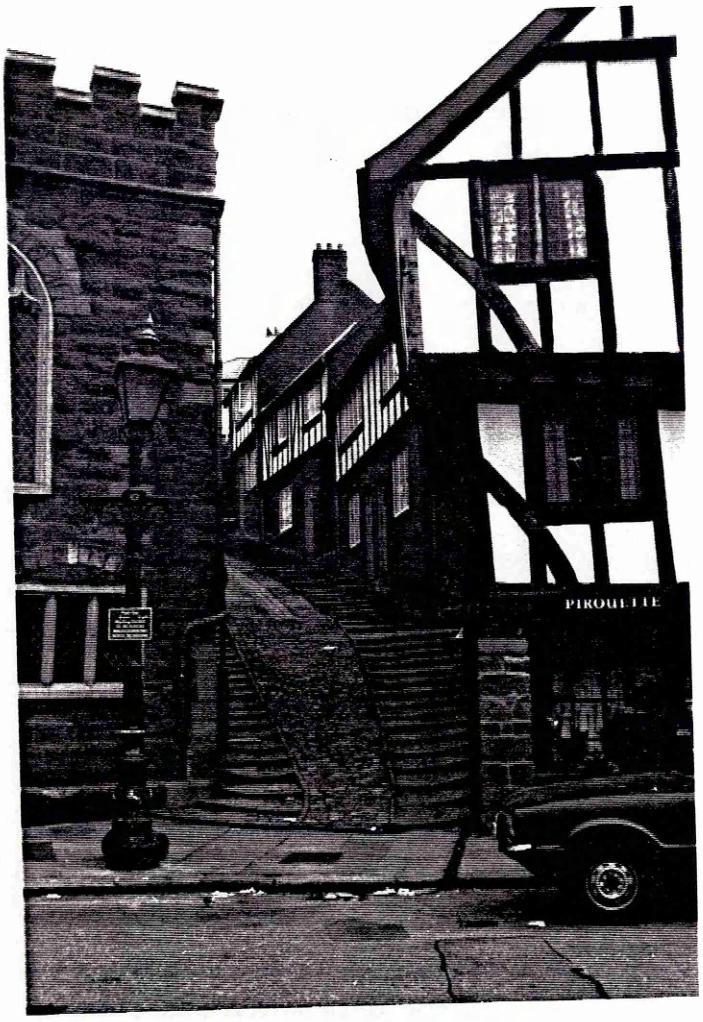
WHEREAS it is expedient that Regulations ſhould be eſtabliſhed and enforced, for preventing, as much as may be, the dreadful Effects of Fire, which the Inhabitants of the City of Briſtol, and the Liberties thereof, are liable to: May it therefore pleaſe Your Majeſty that it may be enacted; and be it enacted by the King's moſt Excellent Majeſty, by and with the Advice and Conſent of the Lords Spiritual and Temporal, and Commons, in this preſent Parliament aſſembled, and by the Authority of the ſame, That, from and after the Appointment of a Surveyor or Surveyors as herein-after mentioned, in all Buildings to be erected within the ſaid City of Briſtol, and the Liberties thereof, the Rules, Directions, and Reſtrictions herein-after preſcribed ſhall be duly obſerved by all Perſons therein concerned; and that no Houſe or other Building ſhall be erected within the Limits aforeſaid, but ſuch as

Preamble.

Regulations for building external Walls.

THE BRISTOL BUILDING ACT 1788
(front page only)

Fig. 3



Houses at Stepcote Hill, St Marys, Exeter, showing jettied upper floors. This form of construction was illegal in Bristol after 1788 due to a restrictive clause in the Bristol Building Act of 1788.

administration of the Act was centred around the appointment of surveyors who were on short term contracts and could be penalised and dismissed from office for neglect of duty (see fig. 4).

Builders were required to give notice of their intention to build and could be fined for failing to do so, or for failing to construct work in conformity with the requirements of the Act. The Act continued in existence until it was repealed and replaced by the Bristol Improvement Act of 1840 (11). In addition to the regulation of buildings, the Act related also to street widening, including compensation and the purchase of houses and land. In addition the Act dealt with nuisances and their prohibition, moneys, mayoral duties and administration. The first 38 sections (see Appendix 2) related to building and in repealing the previous Act it was recognised that contracts taken out before the new Act would continue and moneys due from the former Act could be recovered under the new Act. This also applied to the officers who could continue in office until moved but were accountable for all their books, documents and other effects. The Act provided for an improvement committee to be appointed together with officers necessary to administer the provisions of the Act. The appointment of surveyors was a separate requirement and these officers had to give a solemn oath which was similar to the oath in the 1788 Act. Although the surveyors were paid by the City Corporation, they had the responsibility of collecting fees which were related to five classes of building (12).

The technical requirements closely followed those specified in the London Building Acts (13) and the fine for non-compliance was a maximum of £20. This fine could also be applied to a surveyor who negligently carried out his duties. This was a good attempt to ensure an honest approach to the administration of the Act, but mis-applied could result

The Mayor, Aldermen, and Common Council, to appoint Surveyors, to administer Oaths to them, and also to appoint the several Districts.

XIX. And be it further enacted, That the Mayor, Aldermen, and Common Council of the said City of Bristol, in Common Council assembled, shall and may, yearly and every Year, nominate and appoint such and so many discreet Persons, skilled in the Art of Building, as they the said Mayor, Aldermen, and Common Council shall think fit, to be for One Year the Surveyors to see the Rules, Directions, and Restrictions in this Act prescribed well and truly observed in and throughout the said City of Bristol, and the Liberties thereof, and shall and may appoint the several Districts which shall be under their respective Surveys, and from Time to Time, as they shall judge necessary, shall and may alter such Districts, or any of them; and it shall be lawful for the Mayor of the said City for the Time being, and he is hereby required, to administer to all the said Surveyors an Oath for the true and impartial Execution of their Office in that Behalf, which Oath shall be in the Form or to the Effect following; (that is to say),

The Oath.

I *A. B.* being One of the Surveyors appointed in pursuance of an Act of Parliament, passed in the Twenty-eighth Year of the Reign of King *George* the Third, *for regulating Buildings and Party Walls within the City of* Bristol, *and the Liberties thereof*, do swear, That upon receiving Notice of any Building or Wall to be built, or other Builder's Work to be done within the District under my Inspection, not being by Illness or otherwise lawfully prevented, I will diligently and faithfully survey the same, and to the utmost of my Abilities endeavour to cause the Rules, Directions, and Restrictions in the said Act prescribed to be strictly observed, and that without Favour or Affection, Prejudice or Malice.

So help me GOD.

THE APPOINTMENT AND OATH OF THE BRISTOL BUILDING ACT 1788

in councillors with vested interests having influence over the way surveyors carried out their duties.

* * *

The Liverpool Building Acts 1825-1842

Liverpool, a town larger than Bristol, was also a thriving sea port enjoying the benefits of considerable and expanding trade with the Americas. Liverpool also faced problems coping with a 100% increase of population due to Irish immigration between 1801 and 1830 and this rate of expansion had led to the construction of a considerable number of poor quality houses using cheap and combustible materials and lacking sanitation. Civil Engineer James Newlands [14], the first engineer appointed by Liverpool Corporation, aptly describes conditions prevailing at the time, including high population density, overcrowding, building over gardens and yards, lack of privacy, drainage and cleansing. The Authorities were oblivious to the effects on health and merely concerned that these conditions hindered trade and were an inconvenience to persons and carriages using the street. Whilst the symptoms of these problems resulted in improvement works, the sources were not tackled and consequently, were magnified by succeeding generations who as Newlands argues, not only had to endure these conditions, but also the cost of remedying them. The mayor and magistrates in 1788 considered a report by the town's physicians, drawn up by Dr. Currie, as to the unhealthy state of the town and in 1802 the Corporation of Liverpool applied to Parliament for an Improvement Bill. This Bill would have had a significant impact on those persons causing, or profiting, from the unhealthy state, as Newlands said "the interests of different individuals being affected by the Bill, the old cry of rights of property was as

usual raised in defence of the wrongs of property, and inferior considerations triumphed over public good" [15]. Not surprisingly the Bill failed.

Liverpool's interest in obtaining a Building Act was motivated more by sanitary reform than by safety from fire, but the Act that was secured in 1825 had little of both, being extremely limited as to precautions against the spread of fire, and offering little in the way of better sanitation other than requiring water from buildings to be conveyed to drains and prohibiting smoke discharge from the front of buildings [16].

The majority of these clauses related to requirements that could be found in the London and Bristol Building Acts, whilst the appointment and oath of the surveyors was also very similar. The payment of the surveyors in Liverpool would be by a fixed salary, whereas in London the surveyors would draw a fee relating to the class of building. The Liverpool Building Act of 1825 did not make any positive contribution to solving the insanitary conditions that existed in Liverpool; nevertheless this was a start (see Appendix 3).

The initative to tackle insanitary conditions lay with Local Authorities. The attitude of Government was one of non-interference in what was considered a local matter, it was up to Town Councils to improve their towns. Apart from resistance that Town Councils would have received from persons having vested interests, the cost of securing a Local Act was another deterrent. This could vary between £2,000 and £12,000 depending on the special nature of the legislation [17]. The cholera epidemic of 1832 began to change the attitudes towards local control. The disease did not limit its effect to any one town, neither did it recognise or respect different classes of people, consequently everybody was concerned and many were affected.

Cholera baffled the medical profession and confused Town Councils who were at a loss to discover the cause of the disease and the way it spread. Since the majority of deaths were in areas which suffered from overcrowding, poor housing, lack of sanitation, inadequate drainage, and poor water supplies, it was generally held that these conditions caused or contributed to the spread of disease. Not only cholera was relevant in these areas, for high death rates from typhoid, typhus, smallpox, scarlatina and other fevers were quite common and the death rate from tuberculosis was also high [18]. The problem was to minimise the devastation in human terms.

It was not just the disease that caused illness and death, it was the conditions within buildings and towns that were alleged to have caused or contributed to these diseases that were equally of concern. Living conditions for the poor sections of communities were far from good. The expanding industrial towns often lacked housing at economical rents to accommodate the increasing population [19], as a result houses became overcrowded. Those who could afford to rent a house were attracted to the thousands of small houses being erected in and on the boundaries of many towns. Expansion of towns was often encouraged by Town Councils, some of whom endeavoured to attract workers by means of advertisements.

With this demand for labour the building industry was under considerable pressure to meet the need for houses and business premises. The situation was ripe for speculators. Since there was no control on where or what to develop, builders built the most profitable type of house in the most profitable positions they could acquire. Small terraced properties at high densities were built. These were often arranged in courts, usually open at one end, but not uncommonly closed at both ends. The enclosed courts were frequently unpaved and with no drainage; their

orientation often meant that some dwellings in the court did not receive sunlight and air circulation was severely restricted. In many northern towns, especially Leeds, Manchester, Bradford and Nottingham, back-to-back houses were erected, sometimes planned in court form. These houses had only one wall through which they could be ventilated and consequently it was impossible to obtain a through-flow of air. Sanitary accommodation was provided in detached privies either in the court or at the ends of the terraces (see fig. 5).

As we have seen the lack of paving, drainage and sanitation, coupled with poor water supply and the high population densities caused by overcrowding and compact development provided the perfect environment for the rapid spread of Asiatic cholera. People were beginning to realise that the conditions of urban life could kill. This was understood especially by those who had financial and political control in towns where they and their families may have suffered illness or loss of life from endemic diseases. The death rate increased, especially amongst young children where it was approximately 66 per 1000 births in 1830, but it was also high amongst the adult population of the working clases resulting in an average life expectancy in urban areas of between 15 and 19 years of age [20].

The poor sanitary conditions of urban areas, highlighted by high death rates and the devastation caused by cholera were the prime forces in a desire to seek improvement in living and sanitary conditions. Dr. Southwood-Smith's [21] report on the prevalence of fever in the metropolis [22] was attached to the fifth annual report of Poor Law Commissioners in 1839. In that report he considered that some causes of disease could be removed by sanitary measures in the form of building regulations.

Fig. 5

Back-to-back housing - Thornville Row and Thornville Place, Leeds.

Thornville Street, Leeds.

Back-to-back housing in blocks of eight, four each side. Note space between blocks for location of privy. These properties have been modernised and have internal sanitary accommodation.

Southwood-Smith was an anti-contagonist and believed that if cholera generated itself in putrid conditions in such places as India, similar conditions would promote the disease in England. He believed that fever could not be transmitted in pure air and accordingly he was an advocate of good ventilation in buildings [23]. But Southwood-Smith also advocated some Governmental involvement in securing building regulations. This was not only a move away from local control but extended control from safety in fire to health. The report was widely read and influenced many, including the Bishop of London who moved, in the House of Lords, an inquiry into the conditions of the labouring classes [24]. This inquiry was to be carried out by the Poor Law Commissioners.

The Health of Towns Select Committee and the Building Regulation Bills 1841-1842

The work and reports of the Poor Law Commissioners tended to suggest that disease was proportional to the extent of insanitary conditions. This "sanitarian" approach to the prevention of the spread of disease had the support of many including R.J. Slaney [25], a member of Parliament, who on the 4th February 1840 moved in the House of Commons that a select committee be set up to enquire into the causes of discontent of the working classes in populous districts with a view to applying such remedies as Parliament could devise [26].

Slaney in presenting his proposals was concerned by the lack of legislative provision for the preservation of health and comfort in housing and considered that improvements could be achieved by means of legislative requirements and controls. Aware of the length of time that inquiries can take, he felt that a select committee would be able to act quicker so important was the subject. The House agreed to the proposal

and fifteen members formed the committee with Slaney as its Chairman.

The Committee sat for three months and took evidence from many people. Thomas Cubitt [27], a well known and experienced builder in London, gave evidence as to the type of person who caused such poor housing to be constructed in the first place. The majority of such people were, according to Cubitt, "a little shop-keeping class of person who as an investment would build such houses at low cost for rental. Few persons of capital made such an investment". This statement emphasised the extent and complexity of the problem. New housing estates could more easily be designed and built by recognised builders to acceptable standards but small backland and court type housing was the province of the small speculator and gave rise to the biggest nuisances. Cubitt added that he considered regulations controlling the construction and standards of dwellings would be beneficial but difficult to enforce. Cubitt highlighted another problem where buildings built for another purpose were subsequently used for housing and were unsuitable for that use, often lacking the open space at the front and rear so necessary for good light and ventilation. Cubitt considered back-to-back dwellings were offensive. He pointed out the desirability of constructing party walls to resist the spread of fire and felt special planning was needed so that masses of houses were not built together and the conversion of other buildings into houses was placed under strict control. The widths of streets and drainage were also considered very important, so important that Cubitt thought it necessary for public officers to provide and maintain maps of public sewers in each district. Mr. George Smith, District Surveyor for the South District of the City of London, in his evidence to the Committee, confirmed from his experience of surveying and regulating buildings in Liverpool, Manchester and Bristol, that benefits

would derive from a Building Act which would control ventilation, space about buildings and drainage. Evidence, strong and convincing as this was, had considerable influence on the Committee who in introducing the report on the 17th June 1840 (28) considered that the benefits derived from having a healthier town community would outweigh any benefits so far experienced. The poorer parts of the community should by right be protected from the evils of unhealthy conditions caused by poor sanitary provisions and legislation was the only way this could be achieved. The report commented "in the midst of what appears an oppulent spirited and flourishing community such a vast magnitude of our poor fellow subjects, the instruments by whose hands these riches were created, are condemned, through no fault of their own, to the evil so justly complained of, and placed in situations where it is almost impracticable to preserve health or decency of deportment" (29). Pointing out that there was no Building Act to enforce the proper construction of dwellings for the working classes and no drainage Act to enforce the effective drainage of buildings, the Report asserted that the design, construction, amenities and siting of houses were left to the choice of the client and builder.

The first recommendation contained in the report was for a general Building Act laying down regulations respecting the construction of certain houses for dwellings of the working class. The Committee was aware of the strong feelings that owners had over their "property rights" and endeavoured not to impinge unduly on those rights, knowing full well that to do so would result in considerable opposition. It was considered that such regulations would not interfere with anyone's rights to manage their own property beyond what was necesasry to protect the health of the community. The recommendations were intended to follow the legal maxim "suc utre tuo ut alienum non laedus" (so use your own property as not to

injure your neighbour). This is still the basic doctrine of the law with regard to nuisance.

The regulations would restrict the use of cellars, the building of rows of houses in close courts built up at one end and back-to-back houses which had no through ventilation. The space in front and to the rear of houses was to be proportional to the height of the buildings, there was to be underground drainage and sewers and party wall construction for fire protection, but the preventive nature of these regulations would be such as not to restrict the discretion of the builder. Whilst these regulations would understandably increase building and development costs, the Committee considered that increased cost incurred by complying with the regulations would not be significant, though it could result in a slight increase in rent. To offset anticipated objections and encourage public support, it was stated that an improvement in general health and environmental conditions would be worth the cost. Social benefits would also improve as it was recognised that poor housing was not attractive to live in. This approach was likely to gain public support especially amongst those who needed improved housing standards but the builders did not intend to fund those improvements out of their profit and their parliamentary lobby was strong and organised.

Secondly, the Committee recommended that there should be a general sewerage Act enforcing the construction of sewers to new buildings, the cost of construction being met by the builder and the cost of repairs being met by the rates. This alone would add to the cost of building and renting of houses but there could be no denial that house drains connected to the sewer would produce healthier living conditions when the sewage was disposed of satisfactorily. The Act should provide for

enforcing a connection between existing houses and the sewer, the cost being covered by the owner and the cost of repairs being met from the rate fund. Cess pools below the level of the main sewer should be prohibited. These proposals were quite radical in that they advocated Government involvement in matters mainly of a local nature but having national implications. This would provoke considerable objection but statutory action was necessary as London and Bristol had found out and if Local Authorities would not tackle the problems the Government had to.

This proposed Building Act, if brought into being, would create a major change of principle in that the regulations would be made not only in the interests of safety but also health. Furthermore the Government would be instrumental in making rules and seeing that they were enforced on matters that had previously been local issues, often jealously guarded. Even the form of control was very centralised. The report recommended that in towns there should be a Local Board of Health appointed by the Town Council or Board of Guardians who would report to a Central Board of Health or to the Secretary of State for the Home Department. In larger towns there should be appointed an inspector of nuisances to enforce the statutory provisions. To avoid the expense associated with obtaining a Local Act, the report suggested that the proposed Acts could be adopted by towns with a local vote.

However, recognising the possibility of reaction from towns objecting to the Act, it was proposed that only those towns wishing to have such powers could adopt the Act, (i.e. the adoption of the Act was to be voluntary, not mandatory). Providing a discretionary clause was a weakness that could lead to the most insanitary of towns not having the Act merely because the Town Council did not see fit to adopt it. Indifferent control would not bring about improving sanitary conditions

on a national scale to assist in combating the spread of disease in the way envisaged by Southwood-Smith. The measures recommended did not cover the entire problem of sanitary improvement and the report suggested that further consideration ought to be given to water supply, burial grounds, lodging houses, public open spaces and public bathing. This was widening the area of Government control and influence but it only reflected the extent of the social problems at that time.

Apart from passing private Acts for London, Liverpool and Bristol, to regulate the construction of buildings, Parliament had little or no precedent in comprehending the contents of this report. The Health of Towns Select Committee recommendations were well founded and of such an extent that when taken together with the other matters that needed further investigation it became clear that the field of sanitary reform was quite vast; so vast, in fact, that it was to take the next 34 years before the legislation and administration could begin to deal effectively with the problem. The recommendation on administering the new laws and regulations would again be something new and cause much opposition from landlords who always resisted any form of external control over matters which had previously been of concern only to landlord and tenant. The people who would benefit most from such reform were not in a position to vote either in the towns or in the country and therefore could not influence Parliament in its decision other than by maintaining the high death and disease rates which provided statistical evidence in support of the recommendations. The growing knowledge of the problems, backed by statistical and scientific evidence, was such that they were elevated to a national scale which implied that national action was the solution in that the State would then have the power to intervene and enforce the law (30).

One person who supported the improvement of sanitary conditions in towns and of Government interference, was the Marquis of Normanby [31] who, as the Principal Secretary of State for the Home Office, to whom the Poor Law Commissioners reported, had been made aware of the consequences of the sanitary conditions of the poor and was influenced by the reports of the Poor Law Commissioners.

Normanby, also unwilling to await the report of the inquiry being undertaken by the Poor Law Commissioners, supported Slaney's report by introducing into the House of Lords in 1841 [32] a Building Regulation Bill. So keen was he to see that these measures were brought into Law that he instructed the Poor Law Commissioners to halt their inquiry, but such was the indifference of Government that the Prime Minister, Lord Melbourne directed that this inquiry should continue [33].

This Bill was quite extensive in its requirements, including some 78 clauses. It was based on the London Building Act but with notable inclusions derived from the recommendations of the Health of Towns Select Committee. The Bill provided for the appointment of surveyors, in a similar manner to the London, Bristol and Liverpool Acts; inspection and enforcement of work; penalties and the prevention of back-to-back houses fronting on to streets with no space at the rear, the back wall being common to two houses. This form of construction prevented the floor areas of the house from being properly ventilated. Regulations were also proposed to control open areas around dwellings, the restriction of cellars for habitation where they lacked reasonable headroom, ventilation and street widths. The building of court houses was also controlled. Since ventilation of such houses could be obstructed, totally enclosed courts would not be acceptable; such developments had to be open at one end and be restricted in length. Chimneys and flues had to be constructed

so as to properly extract smoke and prevent fire from spreading to the constructional timbers of the house. Wall thicknesses were specified to ensure structural stability. Party walls had to be imperforate to check the spread of fire between houses. Houses could not be extended so as to prejudice the standard of building established by the Regulations. These 78 clauses extended the provisions of the Bristol, Liverpool and London Building Acts from the structural requirements to prevent spread of fire and collapse of buildings into matters of public health (34).

It was proposed that the Act should be applied to all Municipal Corporations, as defined in the Municipal Corporation Act of 1835 (35), in England, Wales, Scotland and Ireland, including London, and that the provisions of the Act should be obligatory. Normanby's Bill was passed by the House of Lords and introduced in the House of Commons on the 7th May 1841 when it was given a further reading and referred to Committee. The Committee included the provision for the payment of fees to the surveyor, in a similar manner to the London Acts, which would make the enforcement of the Act self-financing and not a burden on the rate payer. These fees would be the surveyors' main income, but the Act did not appear to restrict the surveyors from undertaking other work that did not conflict with their statutory duties. The surveyors would be obliged to take an oath under the Act but this was nothing new and was taken from the Bristol and Liverpool Acts which extended the principle from the London Building Acts of 1667 and 1772 and 1774. The Bill recognised the importance of adequate enforcement; without it the desired benefits would certainly not be achieved. The requirement to appoint surveyors, set fees for their services, and provide offices would establish nationally the office of surveyor which had previously been restricted to local Act provisions. In fact these 78 clauses are worth noting as they show the

extent of proposed control applied to buildings by extending it from fire safety to include matters of health (see Appendix 4).

Despite the growing evidence that such a Bill was needed, Lord Russell, the Prime Minister, abandoned it as there were other matters he considered to be of more concern to the House before the session terminated. Russell's Government was replaced and the new Government, not having been responsible for the formation of the Health of the Towns Select Committee, did not feel obligated to this Bill [36]. Normanby, undeterred, re-introduced the Bill but unfortunately there was insufficient Parliamentary time for it to be dealt with during that Parliamentary session. Normanby once again re-introduced it in February 1842, [37] noting that it had been passed by the House of Lords on two previous occasions. The Building Regulation Bill had been modified only by the statement of fees and an amendment which provided for the surveying of alterations and additions.

The House of Lords passed the Bill for the third time in 1842 [38], but Normanby was facing considerable opposition as the Bill did not have Government support and when the Building Regulation Bill was presented in the House of Commons it was again postponed after the first reading [39]. Town Councils, Improvement Commissions and property owners had strongly objected to the proposals and as a result the Bill was amended [40]. Some objectors emphasised the indifference and disorganised structure of Local Government; Town Councils discredited the Bill by stating that their towns already had building controls that were working satisfactorily and that the Bill represented an intrusion into the rights of property owners; Improvement Commissions agreed that existing controls were inadequate and that they should be given the powers to administer the Bill. In some towns the opposite views were taken. The main objection to

the Bill was the fear of increased costs. Normanby had been aware of this and was of the opinion that many speculators made exorbitant profits and it was those he was seeking to reduce. The Bill itself increased costs as the system of enforcement by appointed surveyors was to be self financing where builders would pay fees based on 2% to 3% of the costs of building work whilst alterations and extensions to buildings would command a fee of only half that rate [41]. This was to increase even further in the London area where fees could be paid for surveyors carrying out similar duties under the London Building Acts [42], a duplication that could be avoided only by the repeal of the London Building Act. Profit margins on low cost speculative housing was frequently less than 10% and the fees alone had a substantial impact on that profit margin. A further increase of cost would be incurred as a result of improved standards of construction, lower density of development due to street byelaws, and the proposed abolition of back-to-back housing only made the projected profit margin lower. This was bound to produce extensive objection.

Objections as to the efficiency of Building Surveyors were also raised. For example it was claimed that certificates issued by Surveyors on completion of a building had fallen into disuse as the requirements of the Act were so minute that no Surveyor could swear that they had all been complied with. But to expect a Surveyor to check every minor detail was an ever increasing task. The obligation to comply with Building Regulations rested with the owner and builders, not the Surveyor whose role involved making periodic inspections and not constant supervision. The Surveyors in Bristol and Liverpool were paid a salary and followed no other business and this was felt less objectionable than being paid by fees, although fees paid would contribute towards their salaries. There was little objection to control being exercised by

independent Surveyors who operated under the London Building Acts, but builders did object to other builders who had been appointed to undertake Surveyors' responsibility and still maintained a building business.

In some cases the Act did not go far enough. Preventing fire and restricting its spread had long been established but it was also an important aspect of public safety that persons trapped by fire should be provided with means to escape. One lone architect pleaded this case. This was obviously a forward-looking proposal, but with the deletion of so many clauses relating to fire resisting construction, it was extremely unlikely to be considered.

The Committee recognised that the proposals were incompatible with the London Building Act and in order to achieve an acceptable degree of harmonisation a new Bill should be constructed which consolidated the Building Regulation Bill with the Drainage Bill, the London Building Acts and all similar local Acts. This was a positive and constructive suggestion, likely to produce a satisfactory solution, but it was not developed further as the brief of the Select Committee was merely to take evidence and report. When the Committee did report they made no recommendation and the report was not debated in the House [43]. However, the Committee did amend the Bill [44] by reducing the original 78 clauses to 35 (see Appendix 5). The Bill was to apply to the whole of the United Kingdom. The office of Surveyor, the oath and fee system were to be retained together with inspection and penalties for contraventions. The fee system was altered to permit authorities the discretion to pay the Surveyors by fees, or salary, or both. The lobby against fees secured a reduction from £3.10s for a first-rate house to a maximum of 10s for any class of house, a reduction in effect from 2-3% to 0.3%-0.5%. At this level of fee it was more probable that Local Authorities would have to

pay their Surveyors a salary as the income from fees would be hardly sufficient to sustain their practice. Consequently, the intention of a self-financing Act was put to one side. A principle was sacrificed to speculative profit. If the industry was able to police itself and absorb the cost it should do so, otherwise it should pay for the Government to exercise these controls. The protection of speculative profit was clearly shown by the deletion of the proposal to prevent the building of back-to-back houses and closed court development as the lobby to retain this profitable type of speculative building was extensive. It was argued that such cheap housing would be more suitable to meet the needs of the working classes at rents they could afford to pay. In addition, all the regulations on the construction of walls, chimneys, flues, timber near flues, chimney heights and the 15 sections regulating party wall constructions were withdrawn. A clause was added allowing Commissioners to enforce the Act in certain ares and granting Liverpool exemption from the Act. The strong opposition to the Bill resulted in its original clauses being so weakened that it could have little impact on preventing the construction of dwellings that had been considered to be objectionable to public health and safety (45). Gauldie argues that the Bill attacked the sanctity of private property (46), which was the same reason Newlands gave for the loss of the Liverpool Building Bill in 1802. Slaney's committee had warned of this possibility when it referred to new regulations being framed to prevent injury to neighbouring property. The ownership of private property was a form of recognition in society. To property owners, standing above the poorer classes and exploiting the use of their property by maximising rents and minimising investment, the thought of Surveyors inspecting and enforcing construction standards, thereby increasing costs, was provocative and encouraged objection. This

was undoubtedly a contributing factor but Normanby had not encouraged support from the professional classes, architects, doctors, sanitarians, builders and developers which would have enabled him to produce statistical information to back the opinions expressed. Consequently public opinion had not been swayed sufficiently to lead politicians to support the Bill.

The weakened bill, by trying to compromise the interests of both sides, invited attack and business interests had the capability of influencing not only Town Councils but even the Government [47]. Opposition to the Bill was sufficient to ensure that it did not receive a second reading in the Commons. Local control was considered to be better. The Bill had contained many of the London Act provisions, and according to Gauldie this similarity resulted in its being considered inferior to the Acts of Liverpool and Bristol and was another reason why the Bill failed [48]. But this was not so. The Bristol and Liverpool Acts took many of their requirements from the London Building Act. If anything, it was the superiority of the London Act and its incompatibility to work alongside an inferior Act particularly as it was not intended to repeal the London Act. It was the intrusion into what were considered local issues, for example the specific requirements within the clauses of the Bill which would restrict the use of local materials that caused builders and builders merchants trading in local materials to object. The fear of Government dominance gave rise to supporting local measures. Certainly witnesses had submitted evidence to the Committee that in their opinion local Acts were better. Gaskell adds that the adverse criticism the Bill received from witnesses and the press was another contributory factor [49], which despite Normanby's parliamentary efforts, illustrates the lack of effort the supporters of the Bill had made to explain their

proposals. Despite all this criticism, property owners had little to fear from the Bill. The provisions of the Bill would not apply retrospectively and therefore existing properties would not have to be improved to the standards set out in the Bill, a point not forcefully put over or even explained by Normanby. Certainly, new houses would cost more. In any case, building houses for the labouring classes was less profitable than other forms of housing[50] and it was the desire to maintain a steady flow of housing with good profits in building and in investment, which resulted in most of the fierce opposition to the Bill. Those who would have been most affected by the Bill shouted loudest, and the comments expressed by Newlands over the failure of the Liverpool Improvement Act of 1802 could equally apply to this Bill.

The Government facing such objections and without positive recommendations from the Select Committee, who, as previously indicated, were not directed to provide any, could not proceed with the Bill and it was finally postponed due to the fact that the report of the Poor Law Commissioners on the sanitary condition of the labouring population of Great Britain would be in the hands of members by the end of the session. Matters relating to drainage and to building regulations could be considered together and it was the intention of the Government to introduce a Bill during the next session of Parliament which would embrace the whole subject [51]. Although the Bill had been lost it was apparent that all levels of society were aware of the problems caused by insanitary conditions and by urban conditions that encouraged filth and pollution. These efforts by Normanby and his supporters mark the beginnings of a surge of public awareness and education in these problems.

The need for good sanitation and soundly built houses, highlighted

by professional opinion, Committee enquiries, reports and publicity stimulated the search for constructive legislation to minimise the social effects, but these influences were offset by determined resistance from speculative builders, developers and other vested interests. Conflicts of interest were clearly beginning to emerge. The Bill represented a sign that national action was needed to solve a national problem. Attitudes of non-involvement in what was considered local issues would not provide a solution, local control being divided, often weak and easily influenced, but the opposition of Town Councils and Improvement Commissioners gave a clear warning that Local Government wanted to retain the discretion to do as they thought necessary. The slimming down of the Bill, especially the exclusion of the clause banning the erection of back-to-back housing and reduction in surveyors' fees, was an indication of how influential the speculative house builder was. Despite the opposition, the Bill had its good points in that it sought to improve the standard of houses amongst the poorer classes and to bring about some uniformity of construction in materials, siting and design. In this respect the surveyors' role was not merely in relation to enforcement; it would also provide the basis for uniformity and the flexibility necessary for good administration. This point had not been made clear and had the architects of the Bill sought wider support from professional opinion and obtained a better press, the Bill might well have been successful (52).

Thus an excellent opportunity to establish the principle of one Building Act for the United Kingdom was missed. It could have provided a uniform standard of control, bringing about equal benefits of improved public health and safety to all. The failure to act, due to extensive objections by vested interests, and a disorganised form of local government, resulted in the development of a form of building control

dependent upon many local Acts which ultimately produced different systems of building control in England, Wales, Scotland, Northern Ireland and London.

REFERENCES

(1) For example, Entwhistle refers to the Babylonian Code of Hammurbi (2,200 BC) in which the death penalty was imposed on a builder who constructed a building which collapsed and caused the death of an occupant.

ENTWHISTLE F.D. BUILDING REGULATION, PRACTICE AND PROCEDURE, London, 1974, p.3.

(2) KNOWLES C.C. AND PITT P.H. THE HISTORY OF BUILDING REGULATION IN LONDON 1189-1972, London, 1972, p.6.

(3) P.P., The London Building Act, 1667, 9, Caroli II, c.3.

(4) CAVE L.F. THE SMALL ENGLISH HOUSE, London, 1981, p.143.

(5) P.P., The London Building Act, 1772, 12 Geo 3., c.73.

(6) P.P., The London Building Act, 1774, Geo 3., c.78.

(7) P.P., An Act for the Better and More Easy Rebuilding the Town of Northampton 1675, 27, CHARLES 2.

P.P., Act for the Rebuilding of the Town of Warwick, 1694, 6 and 7, WILLIAM 3, Chapter 1.

P.P., An Act for the Better and Easy Rebuilding of the Town of Wareham, 1763, 3, GEORGE 3.

P.P., An Act for the Better and Easy Rebuilding of the Town of Chudleigh, 1808, 48, GEORGE 3, c.89.

P.P., An Act for the Better and More Easy Rebuilding of the Town of Blandford 1731, 5, GEORGE 2.

P.P., An Act for the Better and More Easy Rebuilding of the Town of Tiverton 1731, 5 GEORGE 2.

(8) P.P., Calais Paving Act 1548, 2 and 3 EDW VI Cap 38.

(9) P.P., An Act for Regulating Buildings and Party Walls Within the City of Bristol, 1778, 28, Geo 3, Cap. 66.

(10) CHAMBERS J. THE ENGLISH HOUSE, London, 1985, p.176.

(11) P.P., An Act for Regulating Building and Party Walls within the City and County of Bristol and Widening and Improvement of Streets Within the Same, 1840, 3 Vict. Cap. 77.

(12) The fees prescribed by the Act were

	Building	Alterations
1st Class	£3 3s Od	£1 11s 6d
2nd Class	£2 10s Od	£1 5s Od
3rd Class	£2 2s Od	£1 1s Od
4th Class	£1 10s Od	15s Od
5th Class	£1 1s Od	10s Od

(13) The Sectional Headings of this Act are given in Appendix 2. The Act also required street names and numbers to be displayed - a feature of other town improvement Acts later in the century.

(14) JAMES NEWLANDS 1813-1871, Civil Engineer appointed under the Liverpool Sanitary Act of 1846. Became Associate of the Institution of Civil Engineers in 1848 and a member in 1857. Author of "Liverpool Water Supply" in 1849 and the Carpenter's Junior Assistant 1857-61. Was a sanitary commissioner to Balacalava during the Crimea War 1855 - Modern English Biography Vol. 2 p.1121.

(15) NEWLANDS J. "LIVERPOOL PAST AND PRESENT", a paper presented to the Health Section of the National Association for the Promotion of Social Science in October 1858, p.11.

(16) P.P., An Act for the Better Regulation of Buildings in the Town of Liverpool, 1825, 6 Geo 4., c.25.

(17) GASKELL, MARTIN S., BUILDING CONTROL - NATIONAL LEGISLATION AND THE INTRODUCTION OF LOCAL BYE LAWS IN VICTORIAN ENGLAND, London, 1983, p.17.

(18) PELLING, M. CHOLERA, FEVER AND ENGLISH MEDICINE 1825-1865, Oxford, 1978, p.32.

(19) CHECKLAND, S.G. THE RISE OF INDUSTRIAL SOCIETY IN ENGLAND 1815-95, London, 1964, p.27.

(20) BUER, M.C. HEALTH, WEALTH AND POPULATION IN THE EARLY DAYS OF THE INDUSTRIAL REVOLUTION, London, 1926, p.31.

(21) SOUTHWOOD-SMITH, M.D. 1788-1861 Sanitary reformer born Martock Somerset, 21st December 1788. After entering the Ministry, he became a medical student at Edinburgh in 1812. In 1820 he moved to London; LRCP 1821. Showed that fever related to the impoverishment of the poor and that it could be prevented. Member of the Central Board for inquiry into the condition of children in factories (1832). Presented reports to the Poor Law Commissioners on preventable sickness among the poor (1835-39). Founder Member of Health of Towns Association (1840), also the metropolitan Association (1842). Gave evidence to Health of Towns Commission in 1844, Member of Board of Health (1848), becoming a permanent Member in 1850 on leaving private practice. Wrote recognised works on quarantation 1845, cholera 1850, yellow fever 1852 and sanitary improvement 1854. Dictionary of National Biography (D.N.B.) Vol. 18, p.543.

(22) Report as to the removal of some causes of disease by sanitary regulations. Poor Law Commissioners 4th Annual Report, Appendix A Number 1 1838 - House of Commons Papers P.P. vol.28 62-96.

(23) PELLING, M. op cit., (n. 18 above), p.252.

(24) GAULDIE, E. CRUEL HABITATIONS, LONDON, 1974, p.103.

(25) ROBERT JOHN SLANEY - 1792-1862.
Educated Trinity College Cambridge, married 1812, called to the Bar in 1817. Became M.P. for Shrewsbury in 1826 and soon became known by his "benevolent exertions to ameliorate the poor". Spoke

frequently on poor law reform and moved the appointment of a committee for enquiring into the condition of the labouring classes. Chairman of the Committee on the Health of the Poor Classes in Large Towns in 1849 and from 1843-1846 was an active Commissioner on the Health of Towns Commission. Apart from losing his seat for short periods in 1835-1837, 1841-1847, 1852-1857, he remained an M.P. until his death which resulted from an accident falling through a gap in the floor at the opening of the International Exhibition. D.N.B. vol. 18, p.367.

(26) P.P. HOUSE OF COMMONS PAPERS vol.2, 1840 p.384.

(27) THOMAS CUBITT 1788-1855

born Buxton near Norwich 25th February 1788. Worked as a journeyman carpenter and on his return from India in 1811 started business as master carpenter. He built workshops at 37 Greys Inn Road in London and undertook house building. His first undertaking was at Highbury, followed by developments at Newington Green and Barnbury. He then developed at Upper Woburn Street, Woburn Buildings, Gordon Square and part of Euston Square. Development at Belgrave Square, Lowndes and Chesham Place followed. He was employed to build the east front of Buckingham Palace and was connected with other works for the Crown. He became a Member of the Institution of Civil Engineers in 1839.

He gave evidence on a number of House of Commons Committees and took a leading part in the preparation of the Metropolitan Building Act of 1844. His concern about the sewage of the metropolis led to his paper on the subject in 1842. He was also concerned with smoke

nuisance from large chimneys. Although many of his developments were of a speculative nature his buildings were not designed for the working classes but the upper classes and consequently these buildings were well constructed and included sanitation and other amenities. D.N.B. vol.5, p.267.

(28) P.P. HOUSE OF COMMONS PAPERS vol.XI 1840, 384.

(29) Ibid, No. 2410.

(30) MACDONAGH O. EARLY VICTORIAN GOVERNMENT, LONDON, 1977, p.20.

(31) CONSTANTINE HENRY PHIPPS 1st MARQUIS OF NORMANBY 1797-1863.
Eldest son of Henry, 1st Earl of Malgrave. Educated Harrow and Trinity College Cambridge, gaining M.A. in 1818. Entered parliament as M.P. for Scarborough in 1819. Supported Lord John Russell's proposals for parliamentary reform. Re-entered parliament in 1822 as M.P. for Higham Ferrers on his return from Italy. Succeeded to the title of Earl of Malgrave in 1831 and Marquis of Normanby in 1839. Became Lord Lieutenant of Ireland in 1835 and Secretary of War and the Colonies in 1839. Normanby was summoned by the Queen to form a Government in 1839 but was unable to do so and returned to the colonial office. Later transferred to the Home Office until 1841, his last administrative post from which he introduced the Building Regulation Bill. D.N.B. vol.15, p.1116.

(32) HANSARD 3rd Ser. vol.41, p.1293 - Report of third reading of the Bill 30th April 1841.

(33) GAULDIE, op cit. (n, 24 above), p.104.

(34) The Headings of the 78 clauses are set out in Appendix 5.

(35) P.P. Municipal Corporation Act 1835, 5 and 6 Wil., 4 c.76.

(36) HANSARD 3rd vol. 58, p.1300 - 7th June 1841.

(37) HANSARD 3rd Ser., vol. 60 p.94.

(38) HANSARD 3rd Ser., vol. 61, p.316.

(39) P.P. Building Regulation Bill, 1842 Number 33, vol. 1, p.257.

(40) P.P. Building Regulation Bill No. 2, 1842, Number 52, vol.1, p.319 - HANSARD 3rd Ser. vol. 63, p.884.

(41) The fees proposed by the Bill were:

First Rate	£3.10s	Fourth Rate	£2.00s
Second Rate	£3.00s	Fifth Rate	£1.00s
Third Rate	£2.10s	Sixth Rate	£1.00s

(42) This Committee was empowered to report the minutes of the evidence taken before them to the House. Fifteen persons gave evidence including Richard Kelsey, Surveyor to the Commissioners of sewers forthe City of London who had previously been a District Surveyor in the City of London, Joseph Franklin, Surveyor to Liverpool

Corporation, William Scott, Master of Works Dundee, Ebenezer Robbins and John Kempson, both surveyors from Birmingham.

(43) HANSARD 3rd Ser., vol. 64, p.635 27th June 1842.

(44) P.P. Building Regulation Bill, 1842. Number 371, vol. 1, p.367.

(45) The Sectional headings of the Bills are given in Appendix 6.

(46) GAULDIE E. op cit., (n, 24 above), p.117-118.

(47) MACDONAGH, O. op cit., (n, 30 above), p.18/19.

(48) GAULDIE E. op cit., (n, 24 above), p.115

(49) GASKELL op cit., (n, 17 above), p.13.

(50) BURNETT A SOCIAL HISTORY OF HOUSING 1815-1970, NEWTON ABBOT, 1978, p.24.

(51) HANSARD 3rd Ser. P.P. vol. 65, p.356, 20th July 1842.

(52) GAULDIE, op cit., (n, 24 above), p.104.

CHAPTER 2

LOCAL IMPROVEMENT ACTS AND THE HEALTH OF TOWNS

In the previous chapter we have noted how professional people, such as Southwood-Smith, Thomas Cubitt and George Smith were able to inform and influence politicians about the actions needed to introduce Building Regulations in the interests of Public Health and Safety. It was these influences, sharpened by a broadening of social concern which sought to control the construction of houses for the working classes amongst other public health issues. We turn next to the influence of Edwin Chadwick on Building Control.

Edwin Chadwick, as secretary to the Poor Law Commissioners, had the task of preparing a report commissioned by Lord Russell in 1839 (1). At first he shared the views expressed by Southwood-Smith that a Building Act could bring about sanitary improvements, but during the course of his investigations he began to change his views and oppose Normanby's Bill. Chadwick prompted the Government to await his report as he said it would illustrate the problem and suggest the solutions more thoroughly than Normanby's Bill (2). Chadwick's report, presented in 1842, contained 450 pages of evidence, comment, recommendations and statistical appendices and had taken just over $2\frac{1}{2}$ years to complete.

The report set out the sanitary problems facing the labouring classes and then proceeded to put forward a solution based on improving the infrastructure of towns. In doing so Chadwick strongly criticised Building Act procedures and their use as a solution. The living conditions experienced amongst the poor were set against bad housing conditions both in town and country and the report sited numerous

examples of poor construction, dampness, restricted natural light and ventilation, lack of sewers, drainage and water supply.

Of Sheffield the report said "there are parts of the town without drainage, the houses, which are private property, are built without any regard to sanitation or ventilation and constructed in a manner to ensure the greatest return at the least possible outlay" (3). In rural areas similar descriptions were given, "another cause of disease is to be found in the state of cottages. Many built on the ground without flooring, or against a damp hill. Some neither have windows nor doors sufficient to keep out the weather or to let in the rays of the sun or supply the means of ventilation" (4).

Not all buildings were constructed in this manner but it does describe the form of construction often found in low cost housing. Furthermore in many of these descriptions common faults occurred including dampness, poor ventilation, lack of sanitation, inadequate water supply and overcrowding.

These conditions were considered to contribute to the high death rate amongst the poor classes. Mortality figures from mortuary registers of the Metropolitan area for the year 1829 showed that of the 52 deaths recorded, 41 were only 25 years old or less and the average age of the 30 people who died of lung disease was 28 years. Mortality statistics were submitted from the towns and areas surveyed by the assistant commissioners and Chadwick was able to use these figures to compare mortality rates to the known environmental condition of those areas. The collection of this type of information was important in the presentation and understanding of the effects of insanitary conditions and vividly helped to illustrate the underlying issues.

Average Age of Death (in years)

	Manchester	Leeds	Liverpool	Rutland	Truro	Bath
Professional persons and gentry, including families	37	44	35	52	40	55
Tradesmen and families	20	27	22	41	33	37
Mechanics, labourers and their families	17	19	15	38	28	25

Whilst the figures in the above table include a high proportion of children, (for example of the labouring classes in Manchester in 1840 the child death rate for under 5s was 1 in 1.75); they also indicate that the less congested of the rural areas provided a healthier environment. This was certainly a general view, but there were examples of rural areas having a higher mortality rate than certain towns. The City of Bath for instance was described as an extremely healthy town for the majority of the inhabitants, comparable to many a rural area.

Any attempt to improve the health of the working classes by providing sewers, new water supplies, street cleaning and paving would cost money, which had to be obtained from public funds, (e.g. taxes and rates), or by charitable bodies. Chadwick argued that the cost of improving the infrastructure of towns would be offset by a reduction in the cost of treating the sick, increase of working hours and production due to the reduction of sickness amongst workers, reduction in the cost of maintaining the poor, sick, widows and their families.

Chadwick considered the expenditure of so much money to carry out remedial measures was a sound investment that would have immediate effects of economy and public gain by reducing sickness in the worst areas by at least one third. The same conclusion was applicable to the cost of preventive measures directly or indirectly controlled by legislation in the construction of dwellings for the labouring classes. The cost would not necessarily fall on the tax payer but, as an added cost to the property developer and speculator, would doubtless increase the purchase or rental price of the property. Irrespective of the approach someone had to pay the bill and Chadwick considered there would be less objection to his proposals if the burden fell on the tax payer.

Proposals for Improvement

Whilst examples of unhealthy environment due to poor buildings were obvious in almost every parish in England, Wales and Scotland as Chadwick's report had shown, examples of good buildings could also be found and J.C. Loudon [5], in his evidence to the Commissioners described how buildings could be improved. He considered that the essential requisites of a comfortable labourer's cottage were that it should be adjoining a road and so oriented that the sun may shine on every side throughout the year. It should preferably be detached, but not more than two should be adjoined together and situated in a plot with front and rear gardens, the total area being not less than one sixth of an acre. The plot size should be large enough so that the cess pool could be sited as far away as possible, not only from the dwelling, but from any well providing drinking water. Where spring or well water was not available, a storage tank should be situated under the floor into which rainwater could be piped and then pumped up into the kitchen. For health reasons

the kitchen should not open directly into the living room and to minimise dampness the ground floor should be situated 6" to 1 foot above ground level. The privy should be sited away from the dwelling unless it was a water closet piped to the cess pool. The dwelling should have at least two storeys with the sleeping accommodation at first floor level. The staircase leading to the first floor should enter a porch or hall so that in the event of a death the body could be removed whilst the family was in the front room. It will be seen that the standards specified by Loudon, in respect of ground floor and cess pool construction would eventually form the basis of statutory byelaws after 1858. The standards suggested by Loudon for labourers' cottages illustrated how better living conditions could be obtained by controlled building; they would in many respects be very welcome today, particularly with regard to site area, orientation, and the low density of development. On density alone these proposals did not find favour among speculative builders in the expanding industrial towns but were more suited to development in rural areas.

The evidence of Captain Vetch of the Royal Engineers [6], extended consideration of the relationship of internal environment to external environment making reference to the need for good ventilation, drainage, sewerage and isolation from fire risk. Regarding ventilation, he commented on the need for streets to be open and suggested turning blind alleys into thoroughfares, thus ensuring that noxious odours could be dispersed by currents of air. He considered it an absolute necessity that as towns became more and more crowded, drainage and sewerage should be provided, whilst towns which had the benefit of existing drainage and sewerage systems should not expand unless the system had been extended to accommodate the new development. The structural and sanitary defects in houses illustrated by Chadwick and the specification put forward by

Loudon could be controlled by a Building Act, as can be seen from the clauses in the Building Regulation Bill, but to do so would mean detailed specific clauses, which would not only add to the cost of housing, but also be considered as an interference in property rights - one of the reasons for the failure of Normanby's Bill. To avoid these problems and produce a solution that could be more acceptable, Chadwick chose to support the broader approach put forward in evidence by Captain Vetch.

Chadwick and the Issue of Building Control

If Chadwick was to succeed in producing a solution that did not depend upon a Building Act, he had to discredit belief in such an Act. This he proceeded to do by critically examining the problems experienced in administering the few Building Acts in England and Wales. The London Building Act took the brunt of that criticism. He attacked its inflexibility by quoting some of its specific requirements. For example, "the outer walls shall be constructed of well burnt bricks - and the mortar and cement shall be well compounded in the proportion of one part cement and three parts clean sharp sand". In many parts of the country neither clean nor sharp sand was readily available and fine ash had to be used. This would be illegal since no differing materials or construction methods could be used unless approved by Parliament. He recognised that changes from traditional timber framed building to masonry materials would bring conflict, the benefits achieved were not worth the conflict they caused. This inflexible approach was too restricting to the building industry and caused bitterness, frustration and extra expense to many builders (7).

Chadwick then showed how unscrupulous builders avoided a Building Act by simply not building in areas which were subject to

control. Mr Gutch, a District Surveyor in the Metropolis, stated that in his opinion speculators would construct dwellings outside the area controlled under the Metropolitan Building Act to avoid building to the standards of that Act. For example, New Kingston in Surrey, an area built by speculators outside the jurisdiction of the Act which encompassed Old Kingston, was noted for a higher fever rate than Old Kingston which was well drained and healthy[8]. A speculative development comprising forty to fifty fourth-rate dwellings constructed outside the area controlled by a Building Act, according to Gutch would save the payment of a District Surveyor's fee equivalent to the cost of one of those dwellings [9]. Developers were not only confronted with Building Surveyors' fees but also the fees and involvement of numerous other surveyors, such as commissioners of sewers, turn-pike roads, surveyors of highways, paving, bridges. Public benefit in terms of reduced cost and less interference to developers could well be achieved he thought, by combining the duties of many of these posts. Administration of this Act was important and whilst Chadwick recognised both economics and skills necessary, it was not possible to combine many of those tasks because of the differing skills required and to do so would only add to the problems envisaged by Chadwick.

Chadwick considered that any Building Act confined to a town or particular district would force bad builders to construct in areas which did not have building controls. These views had the support of Thomas Cubitt, who in his evidence stated that "anything in the nature of a Building Act that is not equally and skilfully administered will aggravate the evils intended to be remedied. To whatever districts regulations are confined the effect proved likely to follow will be that the builder of tenements that are in most need of regulation will be

driven over the boundary and will run up his habitations before measures can be taken against him" [10].

Chadwick criticised the lack of qualifications, skill and poor administration by surveyors appointed under the Building Acts. The Acts did not specify qualifications for appointment as surveyor nor did the employer seek them. It was not uncommon for builders to be appointed who could, and often did, act unfairly against other builders who had no defence against such actions [11]. It also was alleged that some surveyors were hand in glove with builders to pass inferior work [12], a practice that was to continue for many a year [13]. The clauses of the Act were complex enough to require skilful interpretation and application, but this was not often the case. In one large district of the Metropolis it was reported that junior clerks of the District Surveyor's Office were examining building work for compliance under the Act [14]. This led Chadwick to comment that many Local Authority appointments should be filled by persons having special or scientific qualifications. Even where those qualifications were defined, persons were often appointed who did not have them and this resulted in incorrect administrative and techniccal application, excessive cost and bad quality of service to the rate payer. Chadwick thought that the Committee procedure of Local Authorities protected such officers who had frequently failed in their own businesses prior to securing their Council appointments [15].

These views were entirely justified as it is necessary to have knowledgable persons able to make technical assessments of building work to advise and establish compliance with the requirements of the Act. This argument was being used to destroy any support for a Building Act. Chadwick's disapproval continued when he added to the criticism that

was expressed against the payment of fees during the debates on the Building Regulation Bill, by showing how expensive it was and how little it achieved. Fees payable under the Metropolitan Building Act varied between £3.10s and £1 per house. Chadwick estimated that if the annual rate of population increase in Great Britain (230,000) was accommodated in 59,000 new houses, the fee income could be between £80,000 and £100,000 per annum, equal to the cost of all the sappers and miners in the Army in addition to the Corps of Engineers [16].

In Leeds the increase in houses per year was 855 and this would provide a fee income of £4.12s per day for the Building Inspection work that was estimated to take approximately 3 hours a day. This cost equated to the daily cost of a board of Royal Engineers Officers comprising a Colonel, Lieutenant Colonel, two Captains, two First Lieutenants and two Second Lieutenants [17]. This comparison did nothing to reflect the work of a good surveyor in private practice but merely emphasised the poor pay of the British Army while not recognising the private incomes that many of the officers enjoyed. Chadwick considered that the professional skill and expertise of officers of the Corps of Engineers were far in excess of those persons appointed as Building Surveyors under the Building Acts, and that if the services of men of independent position with the qualifications of engineers were secured, they could not fail to take notice of intentional and unintentional errors of building construction. The low standards among Building Surveyors reflected badly on the administration of the local Building Acts, even though the evidence suggested that the fee income could employ men of better skill and qualification, possibly retired Royal Engineers Officers. If this was the intention it did not succeed. No Building Act was recommended and the question of fees did not appear again for another 132 years.

Chadwick and the Issue of Central Control

Having described how a Building Act would be too specific, add to the cost of building, be easily avoided, be expensive and poorly administered by its surveyors, Chadwick turned to his own solution which was the improvement of the urban infrastructure. This would involve the improvement and installation of sewers, sewage disposal, water supply, roads, and open spaces, work that required the skill of civil engineers and not building surveyors.

His attack on the local inadequacies of Building Act surveyors and the incompetence of local administrators was directed towards discrediting the increasing number of local Improvement Acts that were being passed which included a few controls on building construction and the improvement of the infrastructure of towns. Chadwick seemed intent on destroying such Acts because he believed that the only way to eradicate many of the insanitary problems his report had unearthed, was by an Act of Parliament constituting a central, as opposed to local control, with himself at the helm.

Chadwick concluded that any form of Building Act should aim to control the incremental expansion of towns by ensuring adequate streets, drainage and open space, matters that would not increase the cost of housing. As everyone would benefit from such improvements he thought it was likely to be a more popular recommendation to be adopted, but this view was in advance of its time as the concept of town planning was not fully developed before 1909 (18).

Many of his views were justified, but certainly not at the expense of the rest of England and Wales not having the benefit of Acts such as London, Bristol and Liverpool had. His blistering attack on the inadequacies, mal-administration and cost of administering such Acts

removed any hope of the matter being reconsidered by Parliament [19].

Chadwick proposed that his recommendations could be brought about by an Act that provided a Central Board of Health, to which local boards of health formed by Town Councils or Boards of Guardians would report. The mode of control was that put forward by Slaney's Health of Towns Select Committee in 1840. Thus, Chadwick simply removed the building regulation proposals and substituted his own proposals, a combination he felt had much political support [20]. However his proposals for central control which involved Government interference and responsibility, on matters still regarded as local, would be certain to objection.

Chadwick's recommendations were not sufficiently conclusive to proceed with legislation. The report, however, could not be overlooked; so devastating were its contents that the Government decided to set up a Commission to enquire into the health of certain towns and report its findings to Parliament. The working of the Commission would provide a breathing space for the Government, who were pressured on one hand by the sanitarians and on the other by speculators and developers demanding that the status quo should be maintained.

Local Improvement Acts

The failure of Normanby's initiatives and the lack of Government response to Chadwick's proposals meant that local authorities continued in their own way to improve their town environments. The regulation of building remained a local issue. Discretion as to how towns resolved their problems was one of the features of local self-government. It allowed those in control to do as they pleased and often their interests were not the interests of those who suffered from their actions. Consequently Councils acted in their own way and their independence was

jealously guarded often for vested interest in the affairs of towns. Those Councils who wished to improve their towns could do so within the limitations of their Improvement Act, others decided to do nothing. The City of Bristol improved their Building Act in 1840 (see page 5) and Liverpool did likewise in 1842 with a comprehensive Act of 131 Sections, the first 92 dealing with buildings (see Appendix 6). Outer and party walls were to be constructed of non-combustible materials of specified thickness and openings in party walls were to be restricted. Chimney and flue construction, including heights and openings were controlled and even sizes of timbers and mortar mixes were specified [21]. These requirements were taken from the London Building Acts and related to structural stability and fire resistance. However the Act also included many matters relating to health such as ventilation, size of rooms, restriction on the use of cellars and the cleansing of drains, cess pits and privies. This was an extension of control in areas about which Chadwick had expressed concern. Although the provisions were not as extensive as Chadwick had proposed, it was a good example of how towns could take individual action without the need for general legislation. Towns were more easily subjected to local pressures, as in Bristol when the Council, on amending their Building Act in 1847 [22], was seemingly influenced by Chadwick's criticism, amongst many others, on the imposition of fees. Consequently Section 15 of the Bristol Building Act of 1847 provided for a reduction, alteration or even abolition of fees (see Appendix 7).

Other towns followed, but their Improvement Acts were not as comprehensive in building control terms as those of Bristol and particularly Liverpool. Nevertheless, what was included tended to be based upon those Acts thus making Parliamentary acceptance much easier.

Not all Acts were identical. In 1837 Newcastle-upon-Tyne secured an Improvement Act similar to the Bristol Act which controlled projections from the face of the buildings, thickness of walls, construction of chimneys and the siting of houses [23]. The Leeds Improvement Act of 1842 invested all the powers in the Town Council with which the Improvement Commission was merged, and was the first Act to require house drainage to be connected to a sewer or cess pool. Other controls related to the restriction of projections from buildings, widths of courts, alleys and openings into them [24]. Manchester was able as a result of its Improvement Act to restrict the erection of back-to-back houses with a requirement that an ashpit or privy must be provided in a yard attached to the premises but not in front of any house [25]. Leeds had a similar Regulation but such was the pressure to build back-to-back houses that the Regulations were never enforced [26]. This is an example of how a Local Authority having regulations could be influenced not to enforce them.

The differences that were emerging in the requirements of these Acts were mostly of details, the broad principles being those of the London, Bristol and Liverpool Acts. These differences were often sufficient to allow local materials, methods of construction and even house types to be used, as we have seen with the back-to-back house in Leeds, and many other northern towns. The mere proposal to introduce an Improvement Act frequently led to a boom in speculative building as builders sought to beat the increase in costs that the Act was feared to bring about [33]. The increase in construction costs would mean less investment, less building and lower profits. These fears also influenced many councils in how they enforced their Acts. It depended upon the extent of interest and advantage to those in control or who exercised

influence on the Council; even the appointment of surveyors were subservient to the whims of councillors [28]. Such power and discretion varied. In Sheffield, a surveyor was appointed who could neither read nor write [29], and therefore could hardly be in a position to understand building regulations let alone enforce them. These indifferent standards were found to draw adverse comment over the ease or difficulty that builders experienced in building in various towns. The situation in Sheffield changed later following strong pressure from a group of artisan cutlers who forced the Council to appoint a sufficiently competent and trained surveyor [30].

Despite these relatively minor problems, it was readily accepted that legislation was needed to bring about improvement in property and town environments. This weakened the arguments against legislation being constantly put forward by those who defended the rights of property. The fact that the Acts were controlled locally offset the fear of central control, but the sum of all the Improvements Acts with their common approach in content and enforcement began to take on a national look.

Whilst towns in England and Wales were obtaining their Improvement Acts enabling some control over building construction, a new Building Act was granted for London in August 1844. The Act applied over the greater part of the Metropolitan area and the technical requirements had also increased. The criticism made by Chadwick of the abilities of London Building Act Surveyors had not gone unnoticed and as a solution to that problem it was made a requirement that the surveyors appointed in the future should be qualified for the technicalities and responsibilities of the post. This important improvement resulted in a better and more professional administration and Normanby considered that with a little more thought the Government could apply the Act to other parts of the

Country. This was easier said than done and the Government was in no mood to force such an issue on to Local Government. Instead towns were encouraged to develop their own approaches to town improvements, incorporating building control as they thought necessary. This enabled the Government to give a lead as to specific improvement provisions whilst allowing Local Government discretion over their application, a nice balance that usually satisfied both parties. The Town Improvement Clauses Act introduced in 1847 [31] comprised 216 sections dealing with paving, drainage, cleansing, lighting, party wall construction, street naming and numbering and general town improvement. It was a consolidating Act for Improvement Commissions and Town Councils of England and Wales. Some degree of control over the construction of buildings emerged from the Act as there were similarities between it and the Building Acts of London, Bristol and Liverpool. Surveyors were appointed under the Act and were required to make a declaration which was almost identical to the declarations made under those earlier Acts. The Act required that party walls were to project above the roof; the roof covering was to be of non-combustible materials. The use of cellars for dwellings was also controlled and requirements were made with regard to paving and levels of new streets, street naming and numbering and water down-pipes fixed to buildings. Ruinous and dangerous buildings could either be made safe by the owners or taken down by the Commissioners, who were then empowered to recover the cost or sell the materials. Plans were required to be submitted to ensure public buildings were provided with adequate ventilation. Where plans were not dealt with within 14 days the builder could proceed with the work. This was a form of deemed approval which in effect penalised inefficient Councils by restricting their enforcement powers. Notice of building works had to be given to the surveyor who had

to ensure that no new house was erected without drainage and that the level of the house was such that gravity drainage to the sewer could be achieved. Although the Act could have been improved, it was nevertheless a sign that Parliament was prepared to pass legislation of a public nature to be adopted at the discretion of the Local Authorities, appeasing both the general public and local influences. Thus Central Government control was beginning to develop, bringing about a welcome degree of uniformity. The provisions of the Act, although not as comprehensive as the Bristol and Liverpool Acts, marked the beginning of Building Control for many towns. Nevertheless, the Government did nothing about Chadwick's report for two years and when Normanby again pressed for action he was informed that the Health of Towns Commission had been formed and would soon report their findings (32).

The Health of Towns Commission

The Health of Towns Commission was appointed on the 9th May 1843 (33) with the Duke of Baccleuch as its Chairman. Slaney, who had Chaired the Health of Towns Select Committee in 1841, and had recommended a Building Regulation Act to apply in certain towns, was also a member of the Commission. Its task was to investigate the sanitary conditions of the poorer classes and recommend how the salubrity and safety of their dwellings could be improved by regulation and law. This involved a detailed study of 50 towns having a high rate of mortality and a population in total of over 3 million people. The Commission presented two reports, the first was a proposed Bill dated 27th June 1844, and the second contained an account of the enquiry and conclusions dated 3rd February 1845 (34).

The five divisions of the inquiry related to drainage, including

house, foul and surface water; paving of public streets, courts and alleys; street cleaning and removal of refuse; supply of water for public and private use and the construction and ventilation of buildings. The two reports and appendices highlighted the many problems that existed. The second report contained recommendations as to the remedial measures necessary. Regarding buildings, the Commission was aware of the extent of the self interest of builders and stated "Builders when unrestrained by law, construct houses upon such a defective scale and crowded together upon such small places as to render them insalubrious" (35). The Commission recommended that Town Councils should be empowered to raise money to purchase property so as to open up streets, courts and alleys, to improve ventilation and increase the general convenience of traffic.

This suggestion opened up a wider role for Local Government involving redevelopment in addition to controlling new development. The proposals suggested that sizes of courts and alleyways should be proportional to the height of the buildings but not less than 20 feet wide and open at each end to a height of at least 10 feet. The use of cellars for habitable purposes was to be restricted, unless they were of certain size, having a fireplace, opening windows, open space in front, foundations and proper drains. These proposals would, apart from the obvious benefits of more open space for ventilation, be objected to by developers because it would mean development to a lower density and consequently a lower profit. It has been suggested that the Commission advocated a National Building Act (36) but whilst the Health of Towns Select Committee placed the regulation of building high on its priorities for action, it was quite clear the Commission did not. Instead they claimed that building regulation affecting the structures of buildings was not only a general interference in details of structural stability

and fire protection, it was also unnecessary [37]. Having discussed the need for detailed control on building, the Commission referred to the poor standard of Surveyors appointed to administer local Improvement Acts, few of whom were professionally qualified. The Commission recognised the need to appoint persons of higher qualifications and that the annual appointment was unsatisfactory since it deterred qualified persons from applying. The Commission considered that a test of competency should be established similar to the surveyors appointed in London where they were examined and their appointment approved by the Secretary of State [38].

Many of the views expressed by the Chairman were similar to those that Chadwick had advocated in his report. Chadwick had to ensure that the Commission maintained this approach if his recommendations were to be adopted. This he was able to do. Although he was not a Commissioner he had been treated as a colleague and had been asked to assist in drafting a report on his recommendations. It is therefore not surprising to find the Commission confirmed many of Chadwick's recommendations and agreed in general with him about the form that remedial measures should take.

A conservative attitude on this matter was well expressed. Slaney, who had chaired the Select Committee in 1840, and Cubitt who had given evidence to that Committee, were not able to reaffirm the principles of building regulations due to objections to the previous Building Regulations Bills, whilst Chadwick's report did nothing to enhance the prospect of a general Building Act. The lack of ability by the Commission to accept legislative interference in what seemed to be private matters, gave little hope that this report would be accepted[39].

Thus although the report resulted in a Health of Towns Bill in July 1845 [40] which dealt with the improvement of sewerage and drainage,

control of the water supply and promotion of the general health and convenience of the inhabitants, it was not proceeded with due to opposition prompted by the Town Councils. The latter were quite content with their own Improvement Acts and were suspicious of the Government's intention especially as the Bill included the Commission's recommendation of a central authority as originally proposed by Chadwick. The Bill was not to re-emerge again until 1847 by which time many more towns had obtained their own Improvement Acts.

The Health of Towns Bill 1847-1848

The Health of Towns Bill was presented on 30th March 1847 (41). The Bill received some support but in opposition it was argued that it would cut across many local Acts and raise constitutional problems in repealing them. Morpeth considered it an advantage if private Bills were abolished, but those members who feared central control, because it denied them their independence of political control and the benefits of patronage that existed in many towns, resisted strongly.

Chadwick had advocated that the Bill should include London, but this provoked considerable opposition. Central control was not welcomed and consequently the Bill was withdrawn and re-introduced excluding its application to London. The Bill despite its opposition eventually became the Public Health Act 1848 (41).

Nine years had elapsed since Lord John Russell wrote to the Poor Law Commission concerning the inquiry into the cause of disease amongst the labouring classes of England and Wales. The political battles that were fought, restricting the early introduction of legislation, were largely concerned with interference by the State in local affairs connected with public health. The move towards central control as a

result of the Poor Law Act of 1834, and the provision of elected councils with limited powers as provided by the Municipal Corporations Act of 1835 had made their mark in the restriction of the powers of the previous Corporations. The City and Metropolis of London fought hard not to be included in the Public Health Act (1848), preferring to control their own destiny and to this end had their own system of building control provided by the Metropolitan Building Act which was administered by District Surveyors.

The Act did not provide for building regulations relating to new building, as was proposed in the Building Regulation Bill or contained in local Improvement Acts, as the Health of Towns Commission had not supported the principle of such detailed building control. However certain sections did contain some controls over the construction of dwelling houses. It became an offfence to build over a sewer without consent, and maps of the sewers were to be provided by the Council. New houses could not be built without adequate drains that discharged to a cess pool or other similar place or to a sewer within 100 ft. of the property. The provisions of the Act were not retrospective and consequently existing houses could not be required to be provided with proper drainage, but new or re-built houses had to be provided with a W.C. or ash pit and these requirements could also be applied to existing houses. The choice of facility was the owner's and much depended on the availability of drainage and a public sewer within reasonable distance of the house. This was a necessary power if any substantial progress was to be made in improving sanitary conditions and it was not limited to residential property. Factories employing more than 20 persons could also be required to provide sanitary accommodation for both sexes. New cellars were not to be let as living accommodation unless they were at least

7 ft in height with 3 ft of height above ground level extending the entire frontage. The window ventilation area was to be at least 9 sq ft and the cellar well drained and provided with a fireplace and chimney. This provision was similar to the proposals for the control of cellars in the Building Regulations Bill of 1841. Section 53 of the Public Health Act 1848, required the builder or owner to give notice to the Board, at least 14 days before beginning to dig or lay foundations, giving details as to the level of the lower floor and cellar, with the situation and construction of cess pools and privies. A fine of £50 could be imposed if work started without the approval of the Board, however, it would be lawful to proceed if the Board did not notify the developer of its decision within 14 days of the receipt of the builder's notice. Such were the building provisions, means of administration, and enforcement of this adoptive and centrally controlled Act. Having adopted the Act, many of the provisions could be applied at the discretion of the Local Board. This discretionary element therefore allowed Local Boards to act as they pleased and consequently led to varying standards of administration and achievement. With the Public Health Act of 1848 England and Wales had been provided with the framework for both central and local administration responsible for public health. The Act was to continue in operation for five years.

Despite the encouragement given to Town Councils to develop their own building control and Town Improvement provisions, thus allowing them to maintain their independence and discretion of administration, the application of the Public Health Act and the establishment of a Board of Health was the beginning of Government intervention and the imposition of central control on the way that Local Government conducted its affairs. The conflict of issues and interests between Local and Central Government

which emerged during the consideration of Normanby's Bill could only be widened by this action. Town Councils had the beginnings of a building control system, but it lacked uniformity of application. Not all Town Councils had obtained Improvement Acts but the Public Health Act provided a standard by which urban sanitary improvement could be measured. Both Local Improvement Acts and the Public Health Act were trying to achieve the same result, a better and healthier town environment. It is not just the aims of the Acts but how effectively their administrators achieved these aims which also have to be compared to determine the balance between uniformity and flexibility.

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(1) P.P. Report on the Sanitary Condition of the Labouring Population of Great Britain, 1842 - Poor Law Commissioners - Edwin Chadwick, Secretary to the Poor Law Commissioners and Barrister at Law - 14th July 1842.

(2) See Chapter 1, p.18.

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in 1842 and engaged on drainage works for Windsor in 1843. Examined by Tidal Harbours and Harbours of Refuge Commission in 1844, 45 and 46. In 1846 appointed Consulting Engineer to the Admiralty, retiring in 1863. Author of book entitled "Structural Arrangements Most Favourable to the Towns" in 1842 and also several works on Engineering relating to Railways, Harbours and Sewage. D.N.B vol.20, p.292.

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CHAPTER 3

THE LOCAL GOVERNMENT ACT 1858 AND BUILDING BYELAWS

The General Board of Health

The re-appearance of cholera in 1848 was in itself a driving force for Parliament to complete the passage of the Public Health Act, many members having experienced the devastating effect of the outbreak in 1832. But the Act was too late to be of any assistance in preventing or restricting the catastrophic effects of the new outbreak of this disease. In 1848 the sanitary conditions in the towns and villages of England and Wales, including London, had hardly changed since 1832.

Chadwick was unable to exercise any of the provisions of the new Public Health Act or the hurriedly produced Cholera bill (called the Nuisances Removal Act) until the Board of Health had been formed and gazetted. Lord Morpeth was appointed President, Chadwick was the paid Commissioner and the third member was Lord Ashley [1]. Dr. Southwood-Smith was appointed medical assistant, later to become the fourth Commissioner. The Board was gazetted on the 23rd September 1848. Three days later cholera was reported in Sunderland, reaching its peak in January 1849 to fade away by April of that year. The outbreak was confined mainly to Scotland but in June 1849 it returned with tremendous effect in Manchester, Hull, Leeds, Liverpool and other towns. London too was severely affected. The Board was able to do very little to control the outbreak although its presence did result in a serious attempt to remove filthy areas. In many towns the Board was met with noncooperation, open hostility and downright rejection of its involvement in their

efforts to maintain their independence of action [2]. Whitstable in Kent and Newton Abbot in Devon were two towns where strong local opposition had developed.

In some towns the Board had reason to believe that interested parties would even use misrepresentations and threats to raise opinions against the provisions of the Act. In Macclesfield, for example, the Town Clerk informed the Board that almost three quarters of the signatures appended to a petition of objection could not be recognised as ratepayers. Many signatures were fictitious, repetitive, or those of non-residents. Despite this reaction, the Act was applied in 98 towns by 1852, whilst a further 132 had petitioned for it [3]. Even when a Local Board had been constituted however, there was no certainty that it would carry out its responsibilities. For example the Bromyard Local Board did not elect a Chairman, hold a meeting or take any other measure to implement the provisions of the Act, and after three months of inactivity it became disqualified, thus making the Act ineffectual [4]. At Selby, interested parties obtained a Local Council election by unscrupulous methods with the prime intention of preventing the construction of works approved by the General Board [5]. Complainants to the General Board from the towns of Fareham, Gosham, Castle Ford and Worcester about the stupidity and inefficiency of their Local Boards, were told that the General Board had no power to enforce the provisions of the Act. It was because of this lack of power and the fact that much of the power vested in the Local Boards was discretionary that Chadwick and his colleagues considered it of little use to try to bring non-cooperative Local Boards into line or wave a writ of mandamus at them.

The weakness of the Act was that it tried to be a compromise between supporters and opposition and as such it was not an effective

piece of legislation. It could only be effective where it had total local support. As we have seen the interests of the majority were often denied by the interests of the minority especially when that minority had control. Above all the fear was that towns would be governed by a central body and this principle seemed, by the Town Councils, to be worth fighting over, even if it cost the lives of many through insanitary conditions. The fear of central control was such that following the fall of the Government in 1852, the new President of the Board of Health, Sir William Molesworth, publicly announced that the Act would not be applied where the majority of ratepayers opposed it. With steady progress however, the Act had been applied for in 284 towns by 1854 and Local Boards had been elected in over 170 towns [6]. Nevertheless sanitary conditions could not improve overnight even in areas which adopted the Act, and in those places which did not, sanitary conditions if anything became worse.

The opponents, fearful of Central Government control, had taken every opportunity to discredit the Public Health Board and in particular Chadwick, who repeatedly found himself under attack. Toulmin-Smith [7] described the Act of 1848 as "demoralising and mischievous in every aspect" stating that the authors of the Act had "cunningly used words in utterly deceiving the public" [8]. He placed the Metropolitan Building Act of 1844 in the same category considering that it provided a lot of patronage but little security to the public [9]. He considered that the Act progressed towards central control by removing local freedoms and loosening the foundations of law and property. He described Local Government as "being a system of Government which has the greatest number of minds knowing the most, having the smallest interest, management and control over its subject matter" [10]. In many instances he was right

but, as we have already seen, there were many towns where central control was needed to ensure that benefits likely to be derived from Public Acts were felt by the public for whom they were intended. Resistance by towns not wishing interference from the Board and fearing central control over the rights of property, was conducted with similar force and venom to that levelled against the Building Regulation Bill. Many of these actions were in themselves discreditable and showed the Councils to be untrustworthy in the protection of Public Health. Critical attitudes towards Chadwick found much support in the House and Palmerston realised that if the Bill to maintain the Board of Health were to stand any chance of success, Chadwick must retire. Consequently Chadwick offered his resignation which was followed by those of Lord Shaftesbury and Dr. Southwood-Smith. The Bill held and the workings of the Board continued under a reformed administration. Chadwick's bureaucratic and dogmatic attitudes were partly to blame for his downfall, but his determination to improve the sanitary conditions of the poor classes of society can only be applauded. He had immeasurably helped to improve the ventilation of houses simply by advocating the repeal of the window tax (11), which was abolished in 1851. This invidious tax, first introduced in 1707, applied to all windows in excess of six, irrespective of size. In many rooms, and storeys of buildings, that should have been ventilated by at least two windows, the builder or owner would only insert one so as to avoid paying the tax. With the abolition of the window tax standards of ventilation could be improved without the fear of financial penalties.

During his last months in office, Chadwick was working on a general Building Bill (12). He had previously favoured a Building Act only to change his mind during the preparation of his report. The increasing trend for towns to seek Improvement Acts or adopt the Town Improvement

Clauses Act showed a willingness to accept building controls as a way of obtaining a better urban environment and Chadwick, facing loss of office was eagerly looking for a successful recipe in the field of Public Health. Typically Chadwick's views on desirable building standards were in advance of contemporary thinking. Despite the obvious need for controls on basic construction such as foundations, structural stability, fire resistance, ventilation and drainage, he advocated such matters as thermal insulation, double glazing, chimneys to gas appliances, damp proofing, siphonic W.C. pans and lining of lead pipes with a composition material to restrict lead poisoning (13). The recognition that dampness is injurious to health was correct, but his proposals to minimise this involved the construction of land drains to lower the water table of a building site to below 3' from ground level. This was technically possible using open jointed clay pipes bedded in and surrounded by stone chippings, or simple French drains of stone chippings, but to produce a network of such drains throughout a dense development of working class housing would considerably add to the cost, even without considering the implications of disposing of the sub-surface water collected in the drains. The proposal for floors to be of impermeable materials able to exclude ascending moisture and damp was a little simpler. Stone or brick floors permitted dampness to mix between the abutments and a more uniform floor was certainly desirable. This could be achieved by the use of concrete, a material gaining in popularity due to the increasing availability of Portland Cement since 1840. This material 4" thick placed on an equal thickness of compacted hardcore would produce such a floor but again it would add to the cost. The use of suspended timber floors would also achieve this standard but this type of floor was only found in more expensive forms of housing.

The Public Health Act of 1848 required all new houses to be provided with a W.C. or ashpit. Chadwick now wanted a regulation requiring a siphonic W.C. There were various types of W.C.s such as the long hopper closet, short hopper closet, valve closet and the most common of all, being the cheapest, the pan closet. These closets did not function very satisfactorily due to poor design and flushing arrangements. Chadwick recognised the ability of the siphonic action to pull away the waste but this principle had not been established by any of the manufacturers. The first commercial siphonic pan did not appear until 1870 [14], and was not fully developed until 1900 when the siphonic "Closet of the Century" appeared. To insist on a type of W.C. pan which was not available would have meant that the installation of an ordinary W.C. would have contravened the law and restricted the slow progress of sanitary improvement. Even if siphonic pans had been available their cost would have prohibited their use in working class houses.

Chadwick's proposals for thermal insulation were even more grandiose. Walls were to be non-conductors of heat, impermeable to water and washable inside and out. He called for the use of glazed bricks which, although available, were completely out of the question on economic grounds. Had he advocated sound structural stability, the thickness of walls would have needed to be at least 9" thick, thus avoiding the construction of houses with external walls only 4½" thick. This in itself would resist the penetration of rain on all but exposed sites, together with improved thermal insulation. This form of requirement was more readily acceptable as can be seen in the Building Acts of London, Bristol and Liverpool. The availability of bricks was increasing due to improved manufacturing methods and the growing number of local brickworks throughout the country trying to meet demand.

Furthermore the cost would not be excessively increased after the abolition of the tax on bricks in 1850 while competition was keeping the cost low. Chadwick continued with a proposal that windows should be non-conductors of heat and in cold weather equivalent to the non-conductive qualities of an outer wall. This was a call for double glazing, minimising condensation, and whilst technically possible by the use of inner or outer secondary window frames, the cost could quite easily be found to double. The cost of glass was getting cheaper due to the abolition of tax in 1845 and improved production techniques which soon made the more expensive small pane crown glass redundant. The availability of larger panes of glass permitted less use of glazing bars reducing the cost of windows but this would not have been sufficient to permit double glazing at an economical price. Window sizes had an important impact on ventilation standard. Chadwick's proposal that each living room should have an air flow equivalant to three air changes per hour was too specific, difficult to measure and enforce; a simple requirement relating to size of window opening relative to room size and so located as to provide a cross flow of air within a building would have been sufficient. The size of window could be increased without a significant increase in cost as it was a simple matter of good design.

Gas came into use for lighting in houses from about 1840 and gas cookers started to appear in the early 1850s, but did not become popular until many years later, while gas water heaters did not come into use until 1868 (15). Chadwick's proposal that all gas burners should be provided with a chimney to carry away the burnt gases was a good idea as the early supplies of gas burnt extremely dirty and added to the smoky atmosphere of a room especially where open coal fires were situated. This proposal although desirable was difficult and expensive to achieve, small

metal pipes could have been used as flues supported by brackets and discharging to a chimney, rather an unsightly arrangement within a house. However, this was unlikely to affect working class houses as gas companies would not supply an area that could not afford its product. Domestic lighting was either by candle or oil lamps and heating by means of coal or timber in open fireplaces and this was not to change for some time. Many houses did not have a direct supply of water but in those that did the supply was conveyed by means of lead pipes. Chadwick's awareness of lead poisoning was the basis for his recommendation that lead pipes should be coated internally with a composition material to prevent this problem. Lead is an expensive material and to produce pipes with an inner lining would add to the expense quite considerably. However such pipes were produced and the only two processes considered suitable was McDougal's patent where the internal coating was bitumous and Schwartz' patent where the pipe was boiled in sulphide of lead, a substance insoluble in water (16).

Good design, planning and simple sanitary appliances cost little but have a significant impact on the standard of habitation (17). However, instead of proposing statutory standards that would be simple, effective and inexpensive Chadwick's proposals, while sound and desirable, were not totally relevant to working class housing. More importantly, they were too expensive. Consequently these proposals were ignored and when he left public office the idea of a General Building Bill for the whole country left with him.

The dogmatic and seemingly oppressive way in which the provisions of the Public Health Act were enforced and the control which Chadwick sought, although well intended, maintained the fears of centralisation and consequently opposition remained strong. So strong that the

Government introduced a Local Government Bill in 1858 as an Act to amend the Public Health Act of 1848 and to make further provisions for the local government of towns and populous districts.

The Bill had no opposition as it was clearly stated that its object was to abolish the Board of Health and this move was most welcomed especially by Town Councils. It also had the effect of streamlining Local Government by removing another administrative layer complete with its powers and officials. The Local Government Act of 1858 [18] enabled every town in the country to adopt the powers of local government contained in the Act. With the passing of the Act and the Public Health Act of 1858[19] local government powers became the responsibility of the Home Office and a branch was created in that Office known as the Local Government Act Department with responsibility for local byelaws. At the same time the medical functions of the Board of Health were transferred to the Privy Council. Perkins has described the loss of the Board as a triumph for the entreprenurial ideal, the dominant theory of laissez-faire [20] and de-centralisation, but he argues that one of the forces of centralisation was professional ideal and administrative practice [21]. Certainly persons with skill and knowledge of technical, medical or administrative matters were readily listened to and their views influenced many, as we have seen with the witnesses appearing before committees and commissions. The collective weight of their arugment was easy to accept and difficult to dispute. Because these professional skills were often lacking in local administration and because of the powerful influence of vested interests, Chadwick had suggested that these skills should be provided at Central Government level with the Government taking responsibility. This approach was the basis of Chadwick's administration which might well have been tried. That it was a failure was not as a result of trying, but because

of the poor structure of the Act with its adoptive powers. It would seem that a successful combination might come from local control with Central Government providing professional guidance. This the Public Health Act of 1858 set out to achieve by the appointment of John Simon [22] as Central Medical Officer. The professional officers the new Board of Health could appoint, liaise with and advise the officers of the newly created Local Government Department.

The Local Government Act 1858

This Act provided Town Councils with the power to make building byelaws not only in the interests of public safety but also of health. It followed the principle of allowing local control with central professional guidance but its weakness was that it was adoptive. This was more to the liking of the anti-centralists. Toulmin-Smith described byelaws as an acceptable form of law derived from the laws of the "bye" or dwellers union [23]. Another weakness was that the Act did not apply to Scotland and Ireland although separate building control systems were also to develop in these two countries. As a result there are now, more than a century later, four different building control systems in the United Kingdom. It is extremely doubtful that the diversification of legislative control would have occurred if the Building Regulation Bill had become an Act of Parliament and been reasonably applied throughout the United Kingdom. The provisions of the Act applied to all cities, ports, corporate towns, Chartered Boroughs and all places that had adopted the 1848 Public Health Act. The Town Improvement Clauses Act did not apply to many towns included under the new Act which therefore opened up a larger area of England and Wales in which control of the construction of buildings could be applied. This did not repeal

Improvement Acts and, as we shall see, controls by Improvement Acts and controls by byelaws made under this Act would be administered concurrently. Those towns that had decided not to be cleansed by Chadwick and his Board, or for other reasons, could now adopt the Act by resolution of Council. The control of sanitary administration including the control of building construction would now be administered by local Councils without having to seek private Acts. Many of the issues raised by the Building Regulation Bill and Town Improvement Clauses Act were now incorporated into this Act. These included space about buildings, which could prevent the development of back-to-back houses, control over the occupation of cellars, regulation of streets, structural fire protection, demolition or repair of dilapidated buildings and the provision of sanitary accommomdation and drainage. These matters which were once fiercely resisted as interference with property rights were now quite acceptable to Councils who adopted them. The means by which these Councils could control the construction of buildings was contained in Section 34 of the Act, which repealed Sections 53 and 72 of the Public Health Act of 1848 and enabled the making of building byelaws in respect of:

(1) the level, width and construction of new streets and provision of sewerage;
(2) the structure of walls of new buildings for securing stability and prevention of fire;
(3) space about buildings to secure a free circulation of air and with respect to ventilation of buildings;
(4) drainage of buildings, W.C.s, privies, ashpits, cess pools;
(5) closure of buildings or parts unfit for human habitation, and

prohibition of use for habitation.

The byelaws also provided for giving notice to the Council and depositing plans and sections by persons intending to lay out streets or construct buildings, also the inspection of work by the Council Surveyor, with the power to require faulty work to be corrected or pulled down. The byelaws could not be applied to any building erected before the date of adoption by the Council. The framework of making byelaws was limited to specific parts of buildings. Matters concerning dampness, weather resistance, fire resistance other than walls, chimneys, roofs, etc. were not included and therefore byelaws could not be made on these important constructional elements as had been suggested in previous reports. The most noticeable improvements likely to occur in working class houses, would be in the provision of ventilation and space about buildings. This would provide better natural lighting, sunlight and air circulation which would bring about a better sense of well being and a healthier environment. Requirements for structural stability would, by requiring thicker walls, provide better resistance to rain penetration and improved thermal insulation. Dampness within new buildings still remained a problem, yet it could easily have been solved by requiring a damp proof course in the wall and the provision of a solid or suspended timber floor.

Even these few improvements would be attractive to many Councils wishing to improve housing conditions. Improvement Acts were costly to acquire, specific in their requirements and inflexible in approach whilst byelaws were adoptive and flexible in that they could more easily be changed, though in their requirements they were specific. Indeed they had to be specific as not all Councils had the staff expertise to make professional judgements on technical performance and suitability.

Builders could comply with a requirement for a wall of a certain length, height and thickness more readily than with a statement that the wall should be contructed so as to adequately support the loads applied to it. Furthermore specific standards were more readily translated in terms of cost which was the real objection that speculative builders had. Builders constructing better class properties would have little or no difficulty as Improvement Act standards were achieved and frequently bettered. For those builders who did not comply with byelaws Councils were given important powers to enable them to enforce the requirements by issuing notices requiring faulty work to be removed, altered or pulled down. This task necessitated the employment of a person or persons having suitable knowledge of building, in a similar manner to the administration of the Metropolitan Building Acts, but unlike those Acts, neither the office of surveyor nor the required professional standards were prescribed. No doubt the criticisms expressed by objectors to the Building Regulation Bill, evidence to the Poor Law Commission and Chadwick's opinions, as well as the problems that occurred due to the lack of technical expertise, were still in the minds of the architects of the Act.

This was another example of anti-centralist policy in that Town Councils would not be pressured by law into appointing officers of any prescribed standards of technical education or professional expertise. In towns which had surveyors appointed under their Improvement Acts, a further appointment of a surveyor to administer building byelaws would appear superfluous. The lack of this requirement tended to strengthen the growth of central control as it allowed the Local Government Act Department to develop and maintain the professionalism needed to guide Councils in these responsibilities. This role was to become very effective as the Department had to approve all byelaws that Local

Councils proposed to adopt. Unlike Improvement Acts or the London Building Acts, byelaws were not described in detail in the Local Government Act or its schedules, which at least ensured that Members of Parliament would not argue over the technicalities or take political advantage of such minor matters. The Local Government Department could draft changes in the byelaws at any time to meet changes in building technology and the desired standards of health and safety. A more flexible approach if carefully managed would be more responsive to any pressures applied to the system of control. Proposed byelaws would be checked for relevance and being based on the provision of the Act, they would be enforceable. This mode of central control would tend to ensure that all byelaws were so similar in content and requirement as to produce uniformity of building standards whenever they were applied and the Department eventually produced a model form of byelaws from which Councils could frame their own [24] (see Appendix 7).

The wind may have been in the sails of Local Government but Central Government's hand was firmly on the rudder. However, whilst it was possible to steer Councils in the direction of the Act and the byelaw making powers, there was no obligation for them to adopt the Act or make byelaws. Section 34 of the Act stated "Every Council may make byelaws". This discretionary power was a serious weakness because it also applied to administration. Having adopted byelaws, Councils were not obliged to enforce them. These provisions were in line with the anticentralists' views being supporters of local self government. Those Councils which did not wish to adopt or enforce byelaws, and there were to be many, did not have to do so; furthermore there was no Chadwick, Board of Health, or any other body hounding them to do so. This discretionary form of control would also bring about a haphazard administration, providing

situations whereby speculative builders would tend to build in areas of no control, as previous evidence has shown (see page 40). The Local Government Act was in accordance with the laissezfaire attitudes of the day, in that Government acted by providing minimal byelaws with a local discretionary form of control. This control was not autonomous and the effects of building control in many areas would depend on the bureaucratic attitudes of the Local Government Act Department and the vested interests in Town Councils. The Act nevertheless enabled interested and eager Councils to extend building control and develop sanitary improvements, setting an example to uncommitted Councils and encouraging them to do likewise. The decision to place the administration of sanitary legislation, including building byelaws, with Councils rather than with a central independent body having been made, the foundations on which the current system of Building Control in England and Wales is still based were laid in 1858.

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(1) COOPER, ANTHONY ASHLEY. 7th Earl of Shaftesbury 1801-1885. Born London 20th April 1801. Educated Harrow and Christchurch Oxford. Entered parliament in 1826 as Lord Ashley M.P. for Woodstock and in 1831 to 1846 for the County of Dorset. In 1834 became a Lord in the Admiralty. Succeeded to the title in 1851. Interest in the Lunacy Acts, reform of law for workers in mines and factories, children working in mines and the treatment of "climbing boys", chimney sweep apprentices. In 1847 as M.P. for Bath he visited the slums of London after which his interests in the improvement of the dwellings of the people intensified. Became Chairman of the Central Board of Health and Chairman of the Sanitary Commission for Crimea. DNB. vol.IV, p.1058.

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Born Birmingham 29th May 1816. Publicist and constitutional lawyer. Entered law studies in 1832, moving to London in 1835 and then to USA in 1837 where he undertook historical and educational writing. On returning to London in 1842 completed his law studies and was called to the Bar in 1849. On the approach of cholera in 1847, aroused attention to health matters, particularly in his home area of Highgate. His practice then concentrated on local responsibilities. When proposals were made to raise sanitary conditions and municipal life in London he spoke and wrote on the subject and objected to the Public Health Act of 1848. In 1852 saw the publication of his book "Local Self-Government and Centralisation" and in 1854 "The Parish, its Obligations and Powers". Declined to stand as M.P. in Sheffield in 1852. Formed Anti-Centralist Union in 1854 and undertook the weekly record of "Parliamentary Rememberer" 1857-1865. Died in a bathing accident in 1869. D.N.B. vol.18, p.502.

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CHAPTER 4

THE GROWTH OF THE BUILDING BYELAW SYSTEM

The adoption and enforcement of building byelaws was the responsibility of Town Councils and many, especially the large towns wishing to improve housing, eagerly accepted that responsibility. Byelaws that Councils wished to adopt had first to be approved by the Local Government Act Office. This office, situated within the Home Office, was the only form of central control imposed on Councils as far as building byelaws were concerned. This ensured that byelaws were in accordance with Section 34 of the Local Government Act of 1858. Local Authorities were left free to enforce them as they saw fit. The model form of byelaws prepared by the Local Government Act Office took account of similar controls in Building Acts, the Town Improvement Clauses Act and Metropolitan Building Acts. In adopting the model it was hoped that Councils would present some degree of uniformity in its requirements, but this was not to be. Many towns retained their individuality, taking account of local practice in materials or construction methods. An example is provided by the requirement for preventing the spread of fire between houses. The model byelaw required the party wall between houses to be constructed higher than the roof surface, forming a parapet wall. This requirement was not adopted in Sheffield as it was not a local practice and the roof covering of tiles or slates could be bedded in cement mortar on top of the party wall, forming a fire resisting structure between the two houses. Thus the aim of restricting the spread of fire had been met by two differing forms of construction; the former however was more expensive to construct than the latter. Byelaws that

required the use of slate or tiles as a roof covering and bricks or stone in the construction of walls to prevent the spread of fire, conflicted with the use of thatch and timber which was traditional in many parts of the country. No account had been taken of the fact that timber protected by plaster could offer some degree of fire resistance or that thatched roofs isolated from other buildings would not spread fire. Such omissions often caused builders additional and sometimes unnecessary expense.

When trying to meet the demand for low cost housing either to buy, or more commonly to rent, the speculative builder did not wish to shed any of his profit margins. Taxes on building materials already accounted for 30% of the cost of a house (1) and any byelaw which increased the use of taxable material was itself considered as a tax. High density development was quite profitable and requirements which resulted in a reduction of density were frowned on by speculative builders. The byelaw requirements for space about buildings did just that, preventing back to back housing, opening up court-type development, ensuring adequate space for the circulation of air so as to remove foul smells and to provide air to ventilate the rooms of houses. Speculative builders were not motivated by social, aesthetic or philanthropic considerations but by likely development projects (2) and where they could influence a Council not to adopt or enforce byelaws their interest could be maintained. Despite the eagerness of many towns to ban back to back housing by adopting open space byelaws, this type of house continued to be built in Leeds until 1936 because the Town Council did not exercise their discretion to adopt open space byelaws. The density of development in houses per acre had serious implications for the purchase price or rental, consequently the requirements for open space varied in many towns (see fig. 6), as did the distance that privies and W.C.s had to be located away from houses. These

examples show how Councils, whilst using the same law, could establish a degree of individuality. This was often reflected in the pattern and style of growth of towns. The byelaw requiring a minimum width of street ensured that builders desirous of maintaining maximum density built narrow-fronted houses abutting the back of the footpath (see fig. 7). Later byelaws required space in front of houses as well as at the rear, and this meant setting the houses back from the road, lowering the overall density and creating small front gardens (see fig. 8). Cellars and basements prepared for habitation were controlled in respect of size, room height and ventilation, often making their construction uneconomic. Byelaws were sometimes framed or not enforced so as to allow traditional forms of housing, often profitable to the builder and low in cost and rental, to continue to be built; examples include the back-to-back type in Leeds and also the long rows of single storey-cottages having thin external walls fronting narrow streets built in Sunderland. Variations in sanitary improvements also occurred, for example every new property erected in Sunderland had to be provided with a W.C. whilst in Leeds W.C.s could be shared - a practice that was to continue until 1912.

Byelaws had little effect on the improvement of building technology; in many cases they did not take account of many aspects of current technology such as thermal insulation and the simple insertion of a damp proof course to check rising dampness in walls and floors. This applied also to sanitary appliances such as the W.C. Model byelaws did not require the W.C. to have smooth impervious surfaces with a cleansing action, or the drains to be of a certain size, laid to obtain self-cleansing velocity (see Appendices 8 and 9). The pan closet, described as a horrible device [3], continued to be used for over a century and was still being made in 1891, although the Bramah valve closet

Fig. 6

The Differing Standards of Rear Open Space required to Houses.

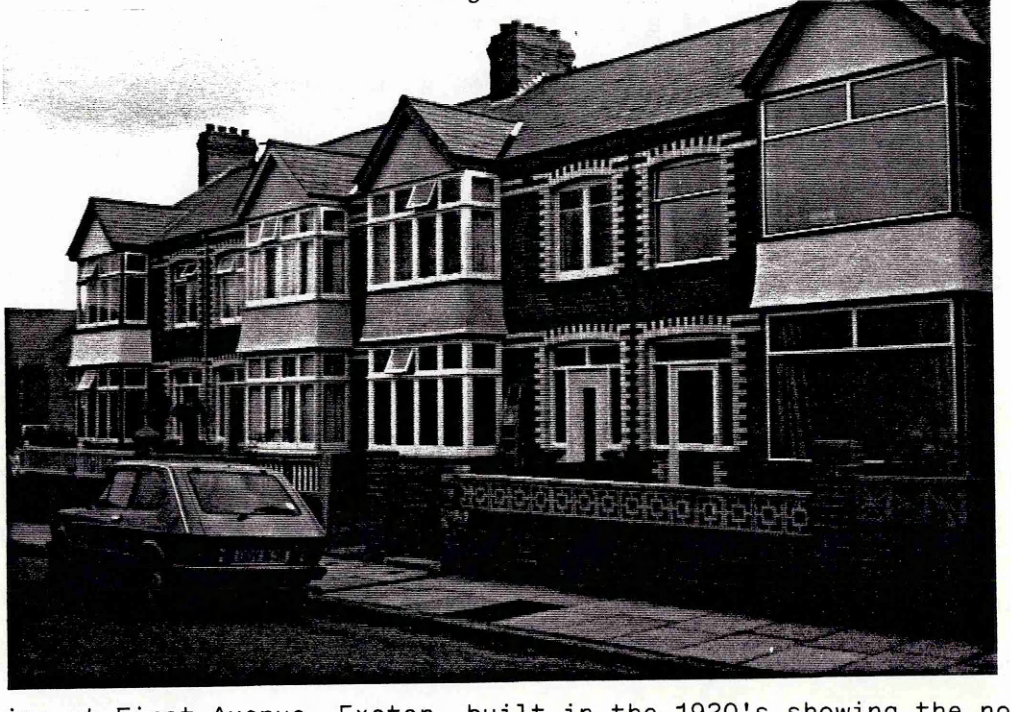
Name of Town.		Area of Open Space required	Distance across.
Bradford, Morley	1 Storey	150 square feet	10 feet
	2 Stories	180 do.	12 do.
	3 Stories	225 do.	15 do.
Bangor, Brighton, Barnsley, Derby, Doncaster, Dover, Grimsby, Leicester, Plymouth, Warwick	1 Storey	150 square feet	10 feet
	2 Stories	150 do.	15 do.
	3 Stories	150 do.	20 do.
	Above 3 Stories	150 do.	25 do.
Bolton	1 Storey	150 square feet	10 feet
	2 Stories	150 do.	12 do.
	3 Stories	150 do.	15 do.
Bradford, Lr. Manchester	1 Storey	80 square feet	10 feet
	2 Stories	80 do.	15 do.
	3 Stories	80 do.	25 do.
Cardiff		Four parts unbuilt upon to five parts built upon.	
Coventry	1 Storey	Breadth of the building by	40 ft across
	2 Stories and above.	Breath of the building by	60 ft across
Darlington	2 or 3 Bedroomed houses	Two-thirds of the entire area of the ground floor.	
	Larger houses.	One half of the entire area of the ground floor.	
Sunderland		One third of the entire area of the ground on which the house shall stand.	

No uniform rule, founded upon general principles, exists, to determine the amount of open space to each house. The above is the amount of open space per house required in different towns, extracted from the Bradford Report on the Building Bye-laws: Referred to in Hole. J. The Homes of the Working Classes - London 1866 : p 111.

Fig. 7

Housing at Jubilee Road, Exeter - erected pre 1912 showing the bye-law requirement for separating walls to be taken up above the roof covering. This construction not only added to the cost but often caused rain penetration due to faulty or no flashings between wall and roof. The requirement for front open space resulted in small front gardens or paved areas appearing.

Fig. 8



Housing at First Avenue, Exeter, built in the 1920's showing the non-combustible roofs being taken over the top of the separing wall which was fire stopped between the slate and top of wall.

a more efficient and less objectional W.C., was by then available. Various improvements were to be marketed, such as the valve closet, the wash down closet and the "Hygenic Closet" with a flushing rim, all of which were connected to suitable traps. Byelaws approved in 1875 still permitted the pan closet to be used [4], but the Local Government Board condemned its use [5] and later byelaws required W.C.s to be of non-absorbent material and to function cleanly [6]. Once technology had improved a material, product or mode of construction, byelaws could be updated incorporating that improvement. Byelaws were designed to prevent bad building and improve sanitary facilities and were structured within the building technology traditional at that time. Consequently, technological development was allowed to lead legislative requirements. However, where an improvement led to the modification of a byelaw, this could be used by many an intuitive manufacturer to restrict his competitors and improve his sales.

Sometimes byelaws were so vague that they had little effect. For example, the City of Bath byelaw for ventilation openings in 1866 required the top part of a casement window to open for the full width of the window but failed to require a minimum size (see fig. 9); consequently any size, even though it would not provide adequate ventilation, was legally satisfactory. This was amended to 1868 to a standard based on the size of the room (see fig. 10).

These variations to byelaw requirements were often as a result of pressure being applied to Councils whereby Councillors would ensure that byelaws did not cause too much conflict with speculative builders and developers and any changes in the byelaws were incremental rather than radical. Gaskell argues that the form of byelaws which most Town Councils followed were sometimes too specific whilst at other times they were too

Fig. 9

The City and Borough of Bath.

The City of Bath Act 1851.

The Local Government Act 1858.

— Bye Laws. —

With respect to the sufficiency of space about buildings and to secure a free circulation of air.

No person shall build or rebuild any house so near any other house as that there will be a less space than 20 clear feet between the front and back outerwalls of the other house and the front and back outerwalls of the newly built or rebuilt house.

No person shall form lay out build or rebuild or permit to be formed laid out built or rebuilt any Court unless the same is of a clear width of 20 feet between the buildings or intended buildings therein and where a court is formed of more than eight houses there shall be an additional width of one foot for every house above eight.

To every Court hereafter formed or rebuilt there shall be an entrance of the full width thereof open from the ground upwards.

No person shall build in any Court of less than 20 feet in width in any part thereof any additional house or add to the number of the rooms in any house therein.

No person shall hereafter build or raise in any Court any house of or to a greater height than 32 feet from the level of the ground floor to the eave of the roof.

No person shall build or rebuild in any Court any house containing more than two floors or stories above the ground floor.

With respect to the ventilation of buildings.

Every window in a house hereafter built or rebuilt shall be a casement window opening on hinges or pivots or shall be so —

constructed as that it may be opened from the top thereof— along the whole width thereof.

For the prevention of Nuisances from the Keeping of Animals.

Every stye hutch pen yard or other place in which a pig or pigs poultry or a rabbit or rabbits may be lawfully kept shall be always kept thoroughly clean and the dung and other refuse shall be removed therefrom every second day to some place so distant from every occupied building and street as that it will not be a nuisance or injurious to health.

No putrid or sour food or other matter which may have been or may be intended for food for any pig or pigs shall be kept so near to any occupied building or street as to be a nuisance or injurious to health.

With respect to noxious or offensive businesses.

Every noxious or offensive business which has been established with the consent of the Local Board of Health shall be subject to the following regulations –

All refuse and rubbish shall be removed from the premises occupied for carrying on the same not less frequently than weekly and every week between the 1st day of May and the 30th day of September in every year nor less frequently than fortnightly and every fortnight during the remainder of every year.

Whenever any other accumulation in or upon the premises used for any such business shall in the opinion of the Officer of Health of the Local Board signified to the Local Board by certificate under his hand be in such a condition as to be unnecessarily injurious to health or offensive the same shall on notice to that effect from the Local Board be removed beyond the limits of the Borough by the occupier of the premises within 2 days from the service of such notice.

General.

The owner and occupier of any premises subject or in which anything thereon or therein is subject to these Bye-Laws

or any of them shall from time to time admit Between 10 o'clock in the morning and 4 o'clock in the afternoon the Officers of the Board or any of them who may apply for admission for the purpose of ascertaining whether the bye-laws are observed in reference thereto or not.

Every person who shall offend against these Bye-Laws or any of them shall be liable for each offence to a penalty not exceeding 20 shillings and a further penalty of not exceeding 10/- for each day during which the offence is continued or unremoved.

These Bye-laws shall take effect on and from the 20th day of July 1866 and shall be in force throughout the whole Borough of Bath.

Made and dated the 28th day of May 1866.

Chairman of the Local Board of Health.

Fig. 10

BYE-LAWS

AS TO

Level, Width, &c., of New Streets and Sewerage thereof,

Made 7th day of January, 1868, allowed at the Court of Quarter Sessions held on the 3rd day of April, 1868, and approved by the Local Government Board on the 12th day of May, 1868.

(a) "*With respect to the Level, Width, and Construction of New Streets, and the Provisions for the Sewerage thereof.*"

Width and Level of New Streets.

I. Every new street shall be laid out and formed of such width and at such level as the Local Board shall in each case determine, and there shall be one entrance at least to every such street, of the full width thereof, and open from the ground upwards.

II. The width of new streets shall be taken to mean any whole space dedicated to the public, exclusive of the slope or projections therein, and measuring at right angles to the course or direction of such streets.

Height of Buildings in New Streets.

III. No building shall be erected on the side of any new street which shall exceed in height the distance from the front of such building to the opposite side of such street; nor shall the height of any building so erected be at any time subsequently increased so as to exceed such distance without the consent of the Local Board. In estimating the height of building, the measurement shall be taken from the level of the centre of the street immediately opposite the building up to the parapet or eaves of the roof.

Drainage of New Streets.

IV. The proposed level and width of any new street having been approved by the Local Board, the Local Surveyor shall specify the depth and inclination, form, size, materials, and other particulars of the sewers and their appurtenances, according to which the works for the proper drainage of such street, and of the adjoining properties, shall be carried out.

Construction of New Streets.

V. The mode of construction of every new street, and the materials to be employed, shall be subject to the approval of the Local Board.

(b) "*With respect to the structure of Walls of New Buildings, for securing Stability, and the Prevention of Fire.*"

Thickness of Walls.

VI. The walls of every new building shall be constructed of such thickness as shall be approved by the Local Board, and the foundations shall rest on solid ground, or upon concrete, or upon other solid substructure.

Materials of External Walls.

VII. The external and party or side walls of every new building shall be constructed of brick, stone, or other hard and incombustible substances, unless the Local Board shall otherwise allow in cases in which it may appear to them that no danger would exist of the spread of fire.

Walls carried through Roofs.

VIII. Any external or party wall of a new building the roof or gutter of which shall adjoin any other house or building, shall be carried up above such roof or gutter to form a parapet of not less than 12 inches in height, measured at right angles to the slope, and above the covering of such roof, or above the highest part of such gutter.

Woodwork in External or Party Walls.

IX. No joists, bressm, or other woodwork fixed in or upon any external or party wall—except bressm or bressmsummers and storey-posts under the same, and frames of doors and windows of shops—shall be brought within four inches at least of the external face of such wall, unless with the previous sanction of the Local Board.

Roofs.

X. The roof or flat of every new building, and every gutter, dormer, and other work or construction connected therewith, except the doors, door frames, windows, and window frames of such dormer and other construction, shall be formed of or externally covered with incombustible materials, except in special cases where otherwise allowed by the Local Board.

Chimneys and Flues.

XI. The chimneys and flues of every building shall be constructed in such mode, and of such materials and dimensions, as shall be approved by the Local Board, but not at a less angle than 45 degrees. All hearths and slabs shall be properly bedded in incombustible materials. No timber or woodwork shall be placed within six inches where stone is used, and nine inches in other cases, of the inside face of any chimney or flue, unless the brickwork or stonework of such chimney or flue shall be properly rendered. No wooden plugs shall be driven nearer than six inches to the inside of any chimney or flue. No openings shall be made in any chimneys or flues for any purposes, nor shall any pipe be fixed in any new building for conveying smoke, heated air, steam, or hot water, except in the manner approved by the Local Board.

Exempted Buildings.

XII. The following buildings and works shall be exempt from the operations of these bye-laws:—Common gaols, prisons, houses of correction, and places of confinement connected therewith, under the inspection of the Inspectors of Prisons. County lunatic asylums, casual houses, and other public buildings belonging to or occupied by the justices of the peace of the county, city, or borough in which the same are situate. Buildings belonging to any canal, dock, or railway company, and used for the purposes of such canal, dock, or railway, under the provisions of any Act of Parliament. All buildings not being public buildings, and exceeding in height 30 feet, as measured from the ground floor, and exceeding in extent 125,000 cubic feet, wholly in one occupation, and distant at least 30 feet from the opposite side of the nearest side or alley, whether public or private, and at least 30 feet from the nearest buildings, and from the ground of any adjoining owner. All buildings exceeding in extent 216,000 cubic feet, and not being public buildings, and distant at least 50 feet from the opposite side of the nearest street or alley, whether public or private, and at least 50 feet from the nearest buildings, and from the ground of any adjoining owner.

(c) "*With respect to the Sufficiency of the Spaces about Buildings to secure a Free Circulation of Air, and with respect to the Ventilation of Buildings.*"

Space about Buildings.

XIII. Every building to be erected and used as a dwelling house shall have in the rear, or at the side thereof, an open space exclusively belonging thereto, to the extent at least of 150 square feet, free from any erection thereon above the level of the ground. And the distance across such open space between every such building and the opposite property at the rear or side shall be 10 feet at least; if such building be two stories in height above the level of such open space, the distance across shall be 15 feet; if such building be three stories, it shall be 20 feet; if more than three stories, 25 feet. When, however, thorough ventilation of such open space is secured, or when on the rebuilding of houses within the town these dimensions cannot be adhered to without considerable sacrifice of property, they may be modified in special cases at the discretion of the Local Board.

Space not to be Built upon.

XIV. Whenever any open space has been left for securing to any building, when the erection of the Local Board has been obtained for its erection, such space shall never afterwards be built upon without the approval of the Local Board.

Height of Rooms.

XV. In any building to be erected every habitable room, except rooms in the roof, shall be in every part 8 feet in height at the least from the floor to the ceiling, and every habitable room in the roof of any such building shall be at least 8 feet in height from the floor to the ceiling throughout not less than one-half the area of such room.

Windows.

XVI. Every habitable room shall have at least one window, and the total area of window or windows, clear of the sash frame, shall be at least one-tenth of the area of every such room, and the top of one at least of such windows shall not be less than 7 feet six inches above the floor, and the upper half at least shall be made to open the full width.

Special Ventilation of Small Rooms.

XVII. Every habitable room hereafter built of less area than 100 superficial feet, and without a fireplace, shall be provided with special means of ventilation, by air-shaft or otherwise, as the Local Board may determine.

Ventilation of Public Buildings.

XVIII. Every new public building shall be supplied with means of ventilation, to be approved of by the Local Board.

(d) "*With respect to the Drainage of Buildings, to Water Closets, Privies, Ashpits and Cesspools in connexion with Buildings, and to the Closing of Buildings unfit for Human Habitation, and to Prohibition of their use for such Habitation.*"

Approval of Materials.

XIX. All houses and buildings which in the opinion of the Local Board are without sufficient drainage shall be drained in the most effectual manner which may be practicable; and the mode of drainage and all materials intended to be used in the construction of the drainage of buildings shall be subject to the approval of the Local Board.

Construction of House Drainage.

XX. The drains of all houses and buildings shall consist of glazed stone ware or fire-clay pipes, or other equally suitable material, and shall be connected with the sewers in such manner as the Local Surveyor shall direct. They shall be laid with water-tight joints, and beneath houses they shall be embedded in and surrounded with well puddled clay. No right angle junctions, whether vertical or horizontal, shall be formed.

Ventilation of House Drainage.

XXI. Proper ventilation shall be provided in the drainage of every house, by such method as the Local Board may direct. All inlets to the house drains shall be properly trapped.

Drainage of Subsoil, and prevention of Damp.

XXII. The house drainage shall be so constructed, either with additional earthenware pipe drains or otherwise, as to drain the subsoil of the premises, wherever the dampness of the site appears to the Local Board to render this necessary. And all rain water shall be so disposed of or conveyed from the roofs of buildings as to prevent its dipping on to the ground and causing dampness in the walls.

Water Closets and Privies.

XXIII. The situations, dimensions, materials, and construction of every water closet and privy shall be subject to the approval of the Local Board. Every water closet or privy shall have an opening as near to the top as practicable, communicating directly with the external air, or shall be otherwise furnished with sufficient means of ventilation.

Cesspools.

XXIV. No cesspool shall be allowed except where unavoidable, when it shall be constructed in such situations and in such manner as the Local Board shall direct. It shall in every case be made water-tight. It shall be arched or covered over, and a pipe or shaft for ventilation shall be carried up from it, or from the drain communicating with it from the water closet or privy.

Ashpits.

XXV. The situations, dimensions, materials, and construction of every ashpit shall be subject to the approval of the Local Board, and shall be of sufficient size to contain the ashes and dry refuse likely to accumulate between the prescribed visits of the scavenger.

Certificate of Completion of New Houses.

XXVI. No new house shall be occupied until the house drainage has been made and completed, nor until such house has been certified by the Local Board, or their officer authorised to give such certificate, after examination, to be, in every respect, fit for human habitation, in their or his opinion.

Buildings Unfit for Human Habitation.

XXVII. In any case where it is certified to the Local Board by the Officer of Health of the district, if any, by the Local Surveyor, by the Inspector of Nuisances, or by any two medical practitioners, that any building or part of building erected since the application of the Public Health Act, 1848, to the said District, is unfit for human habitation, the Local Board may, by their order, affixed conspicuously on the building, or part of the building, declare the same is not fit for human habitation, and shall not, after a date therein to be specified, be inhabited; and any person who, after the date or time mentioned in such order, lets or occupies or continues to let or occupy, or knowingly suffers to be occupied for the purposes of human habitation such building or part of a building, shall be liable for every such offence to a penalty, not exceeding twenty shillings, for every day during which the same is so let or occupied: provided always, that if at any time after such order made the Local Board shall be satisfied that such house has become or been rendered fit for human habitation, they may revoke their said order, and the same shall thenceforward cease to operate.

(e) "*As to the Giving of Notices; as to the Deposit of Plans and Sections, by the Persons intending to lay out Streets or construct Buildings; as to Inspection by the Local Board; and as to the Power of the Local Board to remove, alter, or pull down any Work begun or done in contravention of such Byelaws.*"

Notices, Plans, &c., of New Streets.

XXVIII. Every person who shall intend to make or lay out any new street, whether the same shall be intended to be used as a public way, or not, shall give one month's notice to the Local Board of such intention, by writing delivered to the Local Surveyor, or left at his office, and shall at the same time leave or cause to be left at the said office a plan and section of such intended new street, drawn to a scale of not less than one inch to every forty feet; and every such plan shall show thereon the names of the owners of the land through or over which such street shall be intended to pass; the breed, width, direction, the proposed mode of construction, the proposed name of such intended new street, and its position relatively to the streets nearest thereto; the size and number of the intended building lots, and the proposed site, height, class, and nature of the buildings to be erected thereon, and the proposed height of the division and fence walls thereon; and shall contain the name and address of the person intending to lay out such new street, and be signed by him or his duly authorised agent. Every such section shall show thereon the level of the present surface of the ground above some known fixed datum, the level and rate or rates of inclination of the intended new street, the level and inclinations of the streets with which it will be connected, and the level of the lowest floors of the intended new buildings.

Notices, Plans, &c., of New Buildings.

XXIX. Every person who shall intend to erect any new building, or to make any external structural alteration in any existing building, shall give a fortnight's notice to the Local Board of such intention, by writing delivered to the Local Surveyor, or left at his office, and shall, at the same time, leave, or cause to be left, at the said office, detail plans, and sections of every floor of such intended new building, drawn to a scale of not less than one inch to every eight feet, showing the position, form, and dimensions of the several parts of such building, and of the water-closet, privy, cesspool, ashpit, well, and all other appurtenances; and also plans showing the elevation with the height of the string courses of the adjoining buildings and such plans and sections shall be accompanied by a description of the materials of which the building is proposed to be constructed, of the intended mode of drainage, and means of water supply. A block plan shall be left at the same time, drawn to a scale of not less than one inch to every forty feet, showing the position of the buildings and appurtenances of the respective immediately adjoining, the width and level of the street, and the level of the lowest floor of the intended building, and of the yard or ground belonging thereto. The plan shall show also the proposed lines of house drainage, and their connexion.

The time specified herein is extended to one month, under section 155 and 156 of the Public Health Act, 1875.

Inspection of Works by Local Surveyor.

XXX. The Local Surveyor shall inspect any works or buildings in progress of construction at any reasonable time that he may think fit, or that he may be required to do so by the Local Board; but the person laying out the work, or the builder, shall give three days' notice in writing to the Local Surveyor before the commencement of such work, and before any foundations of new buildings, or any sewers or drains, are covered up; and the like notice shall be given after the works have been completed which may have been required by the Surveyor to be done in consequence of any irregularity, and before such works shall be covered up.

Notice by Local Surveyor in case of Irregularity.

XXXI. If in doing any work, or erecting any building, anything in these bye-laws to the rules herein contained, or anything required by these rules is omitted to be done; or if the Local Surveyor on surveying or inspecting any building or work, finds that the same is so far advanced that he cannot ascertain whether anything has been done contrary to the rules herein contained, or whether anything required by such rules has been omitted to be done; the Local Surveyor shall, within six hours after such survey or inspection, give to the builder or person engaged in erecting such building, or in doing such work, notice, in writing, requiring such builder or person, within forty-eight hours from the date of such notice, to cause anything done contrary to the rules herein contained to be removed; or to do anything required to be done by such rules, but which has been omitted to be done; or to cause any such of any building or work as prevents such Local Surveyor from ascertaining whether anything has been done, or omitted to be done, as aforesaid, to be so ascertained, but such notice shall not require any such work to be opened, or pulled down.

Notice of Completion of Works and Buildings.

XXXII. Within one month after any work or building of which notice was given has been completed, the builder, or person by whom such work has been done, shall give notice to the Local Surveyor thereof, and the Surveyor shall forthwith proceed to survey such building or work, and shall report to the Local Board thereon.

Penalties for not giving Notices, &c.

XXXIII. The Local Board shall by their order approve or disapprove of proposed new works or buildings within the times severally specified herein for the deposit of notices thereof, and the owner or person intending to erect any new street or building shall give the notices hereby required; and if any owner or person shall construct any work contrary to the provisions herein contained, the Local Board, after calling upon such owner or person to show cause why the works so constructed should not be removed, altered, pulled down, or otherwise dealt with, may, if they think fit, have such work removed, altered, pulled down, or otherwise dealt with, as the case may require.

XXXIV. Any person offending against any of the above bye-laws shall forfeit and pay for every such offence a penalty not exceeding five pounds, and in case of a continuing offence a further penalty not exceeding forty shillings for each day after written notice of the offence from the Local Board or their authorised officer.

vague. This fact gave rise to problems of application which led many Councils to turn again to private acts to control buildings [7]. But this was not the only reason. It was often found that the byelaw making powers were inadequate to control aspects of design and construction which in the interests of public health and safety they considered it necessary to control. Thus for example, the town of Stockton secured such an Act in 1869 [8] which provided control over the construction of party walls, partition walls, level of ground floors, space about buildings not to be built on and the height of habitable rooms, together with the requirement to deposit plans, notice of building by the builder and inspection of work by the Council. In the same year, the town of St. Helens obtained an Improvement Act, repealing a previous Act of 1855 [9]. Section 141 of the new Act permitted the Council to make byelaws relating to new streets and buildings, the construction of foundations and walls, with a view to preventing fires. New buildings for public entertainment had to provide means of egress in case of fire or accident (see Appendix 10). This provision was the first of its kind enabling a Local Authority to make byelaws on this subject, a matter that was previously raised when Normanby's Bills were considered (see page 20). There was also provision for byelaws to be made regarding the space about buildings, size of windows and ventilation as well as the drainage of buildings and the provision of W.C.s, privies, cess pools and ashpits. Provisions were also made for the thickness, material and construction of walls near ovens and furnaces, including furnaces not used for manufacturing. Builders were required to deposit plans and give notice of building, whilst the Council had powers to inspect work and enforce the byelaws. Section 142 contained a provision that deposited plans would be deemed to have been approved if the Council had neglected to notify the person who deposited the plans of

their decision. This was an important measure since the Council was penalised for inefficiency in that their powers of enforcement were taken away by the consent deemed to be given to those plans. It also avoided builders incurring increased costs where the passing of plans was unduly delayed. The provisions of this Act generally followed the byelaw-making powers of the Local Government Act of 1858, which the Corporation of St. Helens eventually adopted in 1873 (10). The St. Helens Act was a good example of how a Town Council could extend its powers of control over building. Means of escape in case of fire is a very important aspect of public safety as frequent disasters constantly remind us. This provoked demands for similar protective legislation, adding criticism to the indifference and seeking provision either by local action or by the imposition of Central Government.

Whilst Local Acts often extended the application of Building Control, they did little to improve uniformity of requirements. Further differences occurred when Councils failed to adopt byelaws and relied entirely on Improvement Acts to control buildings. This became evident in Liverpool, where Building Acts remained in existence as the sole means of control over buildings in the City of Liverpool until 1864. The Councils bordering on Liverpool had adopted building byelaws under the Local Government Act 1858. This enabled those Councils to ban the construction of back-to-back houses, a restriction very popular in many towns. These powers were not available to Liverpool because they were not included in their Building Acts. Those desirous of seeking conformity with adjoining Councils applied pressure on Liverpool to adopt similar powers and were successful when byelaws were adopted in 1864. Despite this local initiative, the Building Acts remained in force and were applied alongside building byelaws.

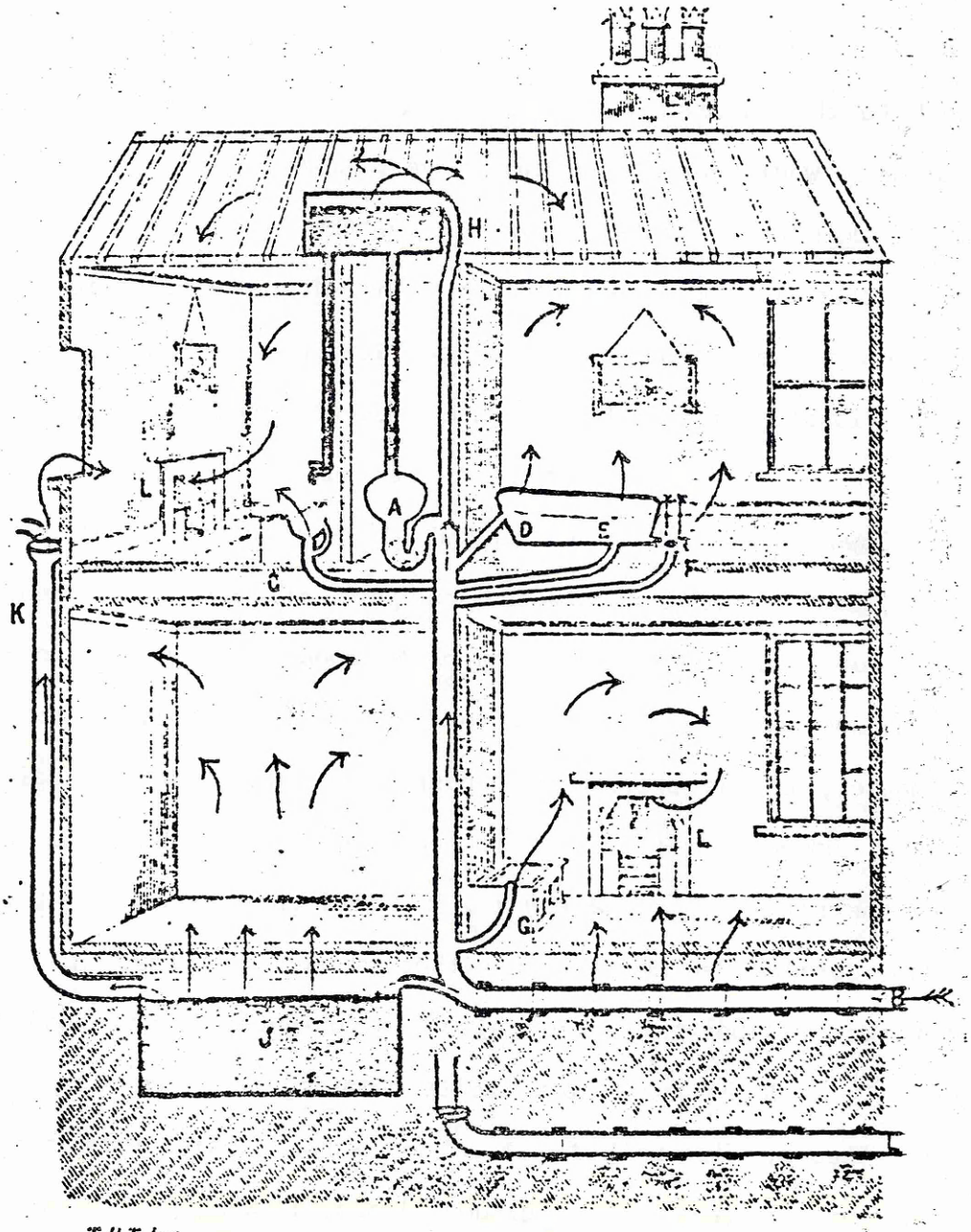
This duality of control existed in other towns. Leicester for example, had six Improvement Acts with regulations controlling the construction of building and in addition had adopted building byelaws for the construction of water closets. Town Councils frequently differed as to their approach to building control, some wanting the best of both Improvement Acts and byelaws. Many builders found the enforcement of both Improvement Acts and byelaws very confusing and most objectionable. These objections were often put aside by Councils, especially those that had adopted byelaws and found them beneficial. The simple fact that these byelaws prevented the construction of row upon row of back-to-back houses in many towns and in their place ensured buildings with some open space, well ventilated, improved arrangements and sanitation was in itself a considerable improvement over previous developments in addition to ensuring adequate stability and fire resistance.

Despite the continuance of Improvement Acts maintaining or extending their powers of control over buildings, Councils continued with the system of byelaw control. The Local Government Act Office found itself constantly in demand by Authorities seeking expert advice, and by 1871 some 1500 Authorities had sought guidance on the framing of byelaws [11]. Even when towns had both Acts and byelaws the way they were administered was given to criticism. Mention has been previously made of back-to-back houses being built in Leeds despite an Improvement Act clause restricting such development. The continuance of this form of building had an advantage for the speculative builder in that the profit element was much higher in this form of housing than in others. The gain in profits at the expense of better housing drew comment from James Hole, writing in 1866, who considered that "social or sanitary conditions do not sufficiently outweigh with the capitalist builder if they involve

increased outlay without a corresponding return... the smaller the house the larger is his percentage profit, hence the space is contracted to the smallest unit. The largest number of cottages consist of a living room, one bed chamber, and a closet called a bedroom, the small capitalist builder who owns it, and maybe a score of these cottage tenements is often as ignorant as the tenant is himself of the vital necessity of light and pure air. If by ingenuity he can cram a cottage or two more on the land, all this increases his percentage profit and he will only be too glad to do it and if there are no municipal regulations enforced he will do it. If by a little contrivance he can let off the cellar as a separate dwelling he increases his profits" (12).

Hole was describing the motives of the speculative builder who built low cost housing. The majority of these builders would take advantage of any weaknesses in the law. Pridgin-Teale (13), through his excellent illustrations, described how speculative builders would construct insanitary housing by taking advantage of specific byelaws that were not comprehensive in their requirement, by using cheap and shoddy materials and deceiving Local Authority surveyors. He described the installation of sanitary appliances such as W.C.s, sinks, baths, basins, without traps or with traps that were easily siphoned off by the flow of water in the pipes and the action of other appliances on the same system (see fig. 11). He pointed out that the terminals of ventilation pipes to drains were often situated in close proximity to windows. He deplored the use of "seconds" pipes by many speculative builders, often resulting in fractures and leaks within, under or in close proximity to buildings. The lack of damp proof courses to walls and the ground floor resulted in obnoxious air being transmitted into the building. Drains were often laid with adverse falls, with no bedding or joints which readily leaked, and

Fig. 11

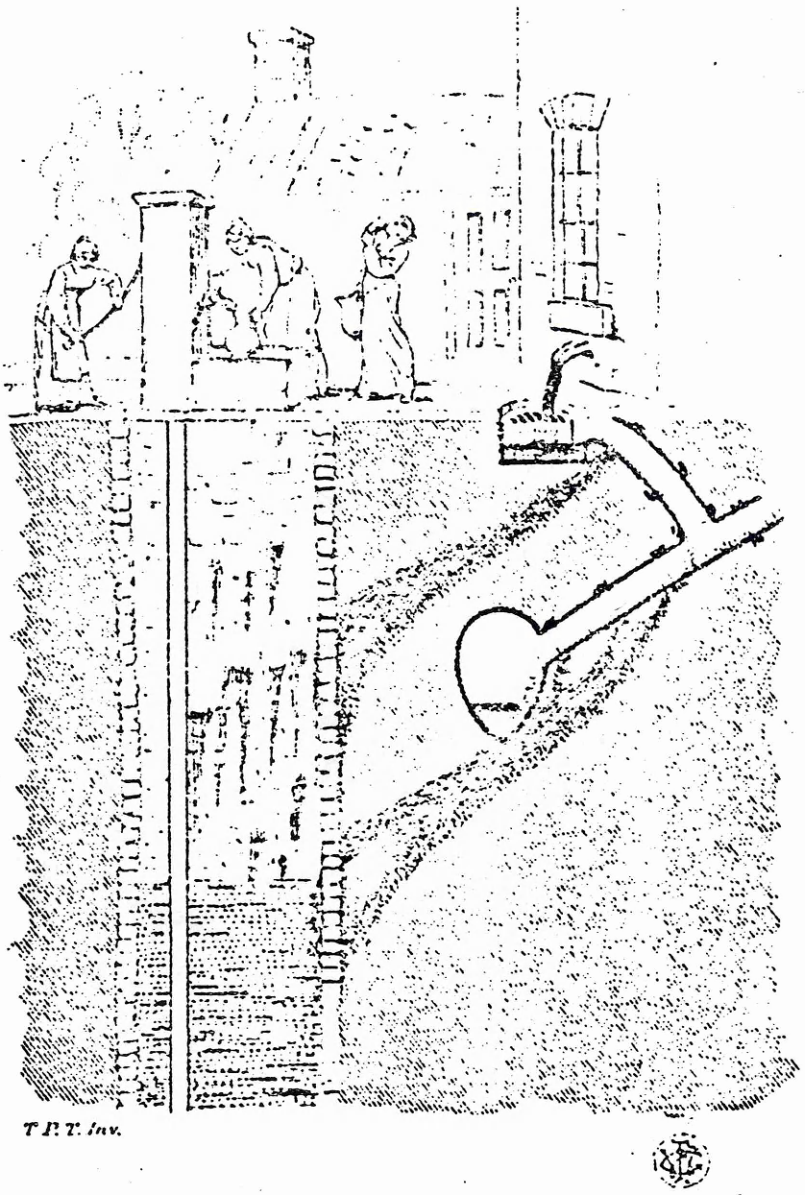


House with every sanitary arrangement faulty.

ILLUSTRATION FROM DANGER TO HEALTH BY T. PRIDGIN-TEALE - LONDON 1878

became blocked, whilst cesspools were situated in close proximity to wells polluting the water (see fig. 12). Drains leading towards, but not actually connected to the sewer were common and Pridgin-Teale describes an easy ploy by builders not wishing the Local Authority surveyor to inspect the drain. They would merely arrange for an inspection at a time inconvenient to the surveyor to inspect, then if an inspection was not carried out they would cover the drains over. However, amongst all his criticisms Pridgin-Teale wrote favourably on the building byelaws in Leeds stating that they had prevented many a bad drainage situation from occurring. On one byelaw concerning the building of dwellings on sites which had previously been used as refuse tips he concluded that "such provisions will surely be impossible in the future thanks to the new building byelaws of our town of Leeds" [14] (See fig. 13). This particular byelaw became incorporated as part of the Public Health Amendment Act of 1890 [15], where Section 25 banned the construction of buildings on any ground which had been filled with faecal, animal or vegetable matter, unless previously rendered innocuous. PridginTeale's observations, comments and recommendations were very practical and relevant to the situation as he saw it. He highlighted how easy it was for sanitary defects to be caused either through bad design, poor workmanship or deliberately. He also investigated rural housing conditions [16] where he found many faults relating to the construction of country cottages, disposal of refuse and water supply. Damp sites, lack of damp proof courses, porous ground floors, leaking roofs, lack of or incorrectly assembled rainwater, foul and waste water systems were common faults. Pridgin-Teale produced recommendations for improvment,often by simple and inexpensive remedies (see fig. 14). He concluded that many of the defects resulted from not complying with

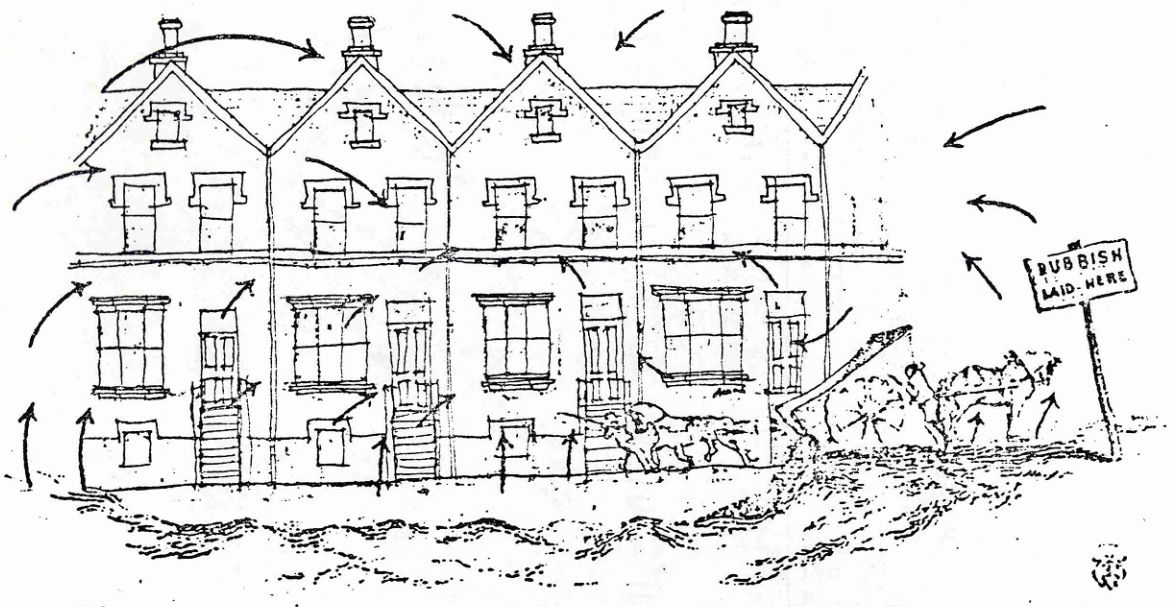
Fig. 12



How people drink sewage.—No. 1.
Drain leaking into a well.

ILLUSTRATION TAKEN FROM DANGER TO HEALTH BY T. PRIDGIN-TEALE - LONDON 1878

Fig. 13



T. P. T. Inv.

"Terrace of the future on refuse of the past."

ILLUSTRATION TAKEN FROM DANGER TO HEALTH BY T. PRIDGIN-TEALE - LONDON 1878

byelaws or Act requirements. He accepted that Sanitary Authorities were not speedy or efficient in enforcing the byelaws and sought to offset this inefficiency by suggesting that everyone should make an effort to improve their houses and so contribute to their own and others' health.

The application of byelaws could achieve these improvements, but when the motivation was lacking, such as in Leeds, criticism was often justified. Hole considered that one should look to Town Councils to remedy byelaw requirements and enforce the many Acts passed by the Government. Whilst a solution lay in that direction, the motivating forces of vested interests frequently brought about a lack of control or indifferent control with little benefit to speculative builder and public alike. Hole remarked that local self government, in many cases, meant local mis-Government and there was a need for a central body to force the Councils to carry out their duty (17). Simon, after many years of public service also concluded that a strong central control was needed. He was very concerned about the difficulty of attaining a balance between the inexorable pressure of the commercial screw towards starvation wages and the establishment by Parliament of laws relating to public health, including the wholesomeness of buildings. On the laws relating to dwellings, Simon was extremely critical of all Local Authorities, including Town Councils, describing them as inefficient, even corrupt. He claimed that the beneficiaries of the law had consequently not received the protection the law had intended for them and he pointed out that these injustices had caused unnecessary exposure of the public to diseases which an efficient and effective administration should prevent. "I refer to the quantities of disease and death brought upon the public through the almost unbounded facility that exists for abuses and dishonesties in the house trade and by the frequency with which jerry-

Fig. 14

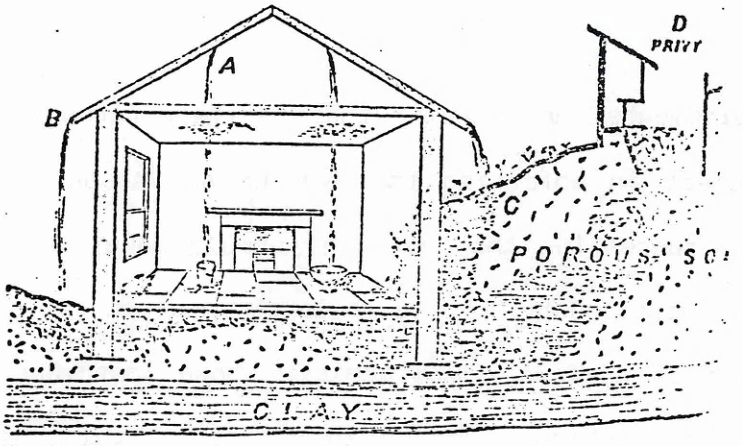
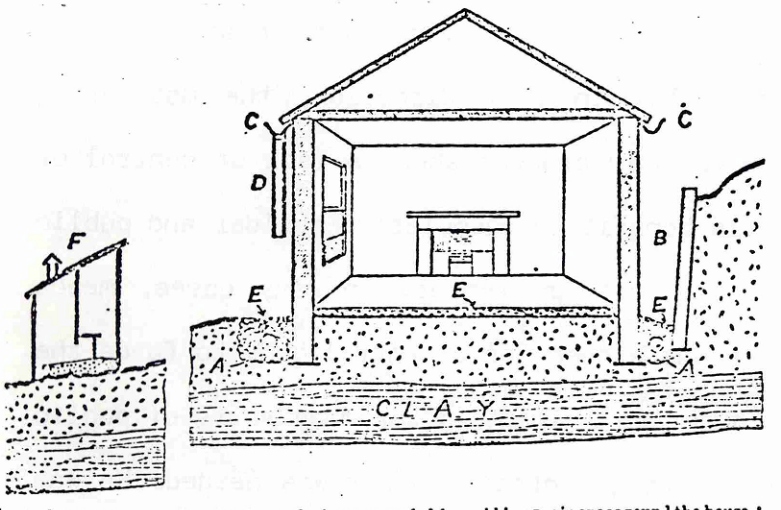


FIG. 1.—Cottage, damp from A, roof leaking into ceiling; B, unguttered eaves; C, outer wall, wet with soakings from garden and privy midden; D, privy midden ground floor.



1.—Remedies applied to fig. 1. A, drain surrounded by rubble; B, air-space round the house; C, rain gutter; D, fall pipe; E, concrete surface; F, privy removed to lower level.

Illustration showing the simple constructional and siting improvements that could be made to cottages which did, not significantly, add to the cost of the dwelling.

ILLUSTRATION TAKEN FROM THE JOURNAL OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND - 1892

built and other unfit houses having in them latent malconstructions, dangerous to health are let for hire to persons who have not knowledge enough to protect themselves against harm" (18). This was an indictment against Local Authorities justified by all the evidence Simon had accumulated over the years. Both Simon and Hole considered that Councils should be under some form of central control to see that these powers were fairly and honestly carried out, and to do this every town should have medical and health officers. Moreover, a general Building Act regulating widths of streets, prohibiting back-to-back houses and cellar dwellings and controlling the construction of houses should be introduced. This was a move back towards Acts and regulations but centrally applied as opposed to Local Authority adopted.

Most of these powers were already on the statute book, but because they were discretionary powers Councils could avoid their adoption and enforcement. These views, nevertheless represented quite the opposite to the policies advocated by Toulmin-Smith in 1851 which were widely supported. Interference with the rights of property was still objected to at local level and Councils, Committees, Councillors and Officers frequently considered they were acting correctly in refusing or restricting any action which had the slightest connection with the rights of property and these attitudes were bound to result in very indifferent application of Local Improvement Acts and building byelaws. Simon and Hole spoke clearly for all who advocated that Government action and municipal interference were not only necessary, but the only means by which better housing could be brought about. Local control with central guidance was, by virtue of the Public Health Act and Local Government Act of 1858, beginning to emerge as a better alternative to Local Act administration despite the forceful opposition of vested interests.

A form of housing development that seemed not to need local control or central guidance was the design and construction of houses for industrialists who not only recognised the values of good housing for their employees but had the economic power to provide them. This approach started prior to 1782 with a few houses often in terrace form, but in that year Richard Arkwright started to develop New Lanark in Scotland. The village was completed in the early 1800s by Robert Owen and by 1816 housed 2,297 people [19]. A smaller project, the first in England, was begun at Belper in Derbyshire in 1792, but it was not until the mid 19th century that villages for industrial workers were constructed near the woollen towns of Yorkshire. The first was begun by Colonel Ackroyd at Copley in 1847 which was eventually completed in 1853. This development comprised back-to-back houses, school, library and workers' canteen. Ackroydon, near Shipley, followed in 1859; Saltaire, developed between 1850 and 1870 by Sir Titus Salt comprised 850 houses, 45 almshouses, a Church, institute, baths, shops, hospital and park. All the houses were well constructed with sanitary facilities and development on this scale could take advantage of proper planning allowing for good road layout and open space much in the manner that Chadwick had envisaged in 1842 (see page 43). Port Sunlight, in Cheshire, is a good example of this type of development, commenced in 1888 and constructed into the late 1920s. Here the houses were either semi-detached or built in groups of 4 to 6, separated by open space and having open fronted gardens on to curved streets so that houses and landscape merged together avoiding the monotonous grid iron urban layout that characterised byelaw housing during this period. Bournville, on the outskirts of Birmingham, was built by the Cadbury Brothers and began in 1893 on some 120 acres. The housing was made available to people who were not employees of Cadbury.

1,000 houses had been built by 1912 and 3,500 by 1955. Not all development was carried out with this approach to good planning, construction and sanitation. Whilst many a speculative builder battled against the enforcement of building byelaws, Ebenezer Howard, continued the theme of planned development and transferred this idea from a philanthropic approach to one of self support. He established in 1903 the first Garden City Limited and proceeded to develop Letchworth Garden City, in Hertfordshire, and this was followed in 1920, with the development of Welwyn Garden City. The philanthropic and garden city developments were planned and built by those who wanted to have a better standard of housing, village and town layout and felt that their objectives would be achieved by adopting sound principles of town planning, consequently with this motivation, building byelaws were considered unnecessary as the standards imposed would not only be achieved but often bettered. The gradual improvement brought about by the housing ideals of philanthropic housing and the imposition of byelaw requirements raised the level of speculative house-building so that the skilled workman was able to find a house that was safe and sanitary, either to rent or to buy.

Despite these different approaches to housing for the working classes, the problem remained unsolved. By the turn of the century some 100,000 houses were estimated to be necessary to meet the demand for decent housing [20]. Market forces always had a controlling influence over speculative builders and consequently their output varies and they will only build when the market has the buyers for their products. Estate and industrial philanthropic developers built to suit their own needs and not the wider needs of the poorer classes [21]. Tarn argues that speculators and philanthropic bodies were not able to deal with the

problems of housing for the poor. Commercial philanthropy seemed to lose sight of its initial objectives and moved in the direction which favoured the vested interests of the capitalists [22]. Both groups found that building controls were to be avoided because they increased costs by requiring specific construction. They also reduced the number of houses by requiring space standards, interferred with the choice of materials and form of construction and were frequently irrelevant. These reactions came when byelaws and regulations were being enforced, albeit indifferently and infrequently. The speculators sought to lobby Councils, influence the political control of byelaws and prevent their enforcement. The continuance of back-to-back housing in the city of Leeds is a prime example of this influential control. The philanthropist tended to seek exemption from byelaw control as it was frequently contended that the standard of housing produced under their schemes was better than the standards imposed by byelaws. Local Authorities who eventually took over the mantle of the philanthropic developer continued as we shall see with the theme of exemption whilst the speculator continued to seek avoidance.

The adoption of building byelaws and the retention of Local Improvement Acts were certainly creating a division between local and central control. Many Councils wanted overall control and those who maintained that approach were causing indifference and creating a haphazard attempt to improve a national problem, namely insanitary urban and rural areas and poor housing. This attitude is not surprising especially amongst towns which were leaders in the creation of legislation to improve the construction of buildings, but even Liverpool, a founder member, had to adopt byelaws to bring about some uniformity in the Merseyside area. There was a need to reduce these differences. Town Councils were politically strong and the system of control by Local Act

Fig. 15

Norman Row, Leeds.

A back-to-back housing - built in 1890 - 1907, with bye-law approval at a density of 30 to 40 per acre, in long unbroken lines, each house comprised a scullery, living room, two bedrooms, attic with semi-basement of cellar and W.C., 15ft forecourt. Modernised in the 1970's. Generally described as a Type 3.

Norman View, Leeds.

Back-to-back housing erected in the late 1920's and up to 1935/36. Bye-law approval was given for the construction of long unbroken terraces with small front gardens. The development had the requisite street layout approval. Each house comprises of scullery, living room, two bedrooms, bathroom with W.C.

was difficult for Central Government to influence and control. Both systems had weaknesses in that the standards imposed were specific. This did not provide the flexibility needed to permit other materials to be used that would meet the intentions of the regulations. At the same time they lacked sufficient detail to prevent unscrupulous builders from taking advantage of inadequate byelaws. Thus two major issues were beginning to emerge from the introduction of byelaws which were frequently magnified when the control applied by Councils through their surveyors, varied from virtual ignorance and non-enforcement to extremely bureaucratic and petty.

The haphazard approach by Councils was also repeated by the Government who, at the threat of a further outbreak of cholera, introduced the Public Health Act of 1866 (23). This Act amended the Sewage Utilisation Act of 1865 enabling the formation of special drainage districts and providing for better house drainage. Dwelling houses without a drain could be required to be connected to a sewer if within 100 feet, if not, a cess pool or some other adequate place was to be provided. In addition, earth closets could be constructed instead of water closets and every dwelling house, new or rebuilt, was required to have a water closet, earth closet or privy. The powers contained in this Act would be available to every sewer authority. The basis of this legislation is still operative today, but these provisions only added to the existing problem in that they created one more authority. It was a reflection of the faith that Central Government had in the ability of existing authorities to enforce the powers they already had. The second part of the Public Health Act of 1866 dealt with nuisances and introduced into Local Government a very important responsibility that would ultimately be shown as very relevant to building control over a 100 years

later [24] and that was "a duty" to administer the provisions of the act for the benefit of persons for whom it was intended. This Act expressly declared that it was the duty of Councils to provide for the proper inspection of their districts to locate nuisances and to remove them. Those that did not carry out that "duty" could be forced to do so by the Secretary of State and the Courts, a further encroachment of central control.

The 1866 Act did not contain all that Simon had wished for on the subject of Building Regulation [25]. This Act was typical of the piecemeal way that sanitary problems were being dealt with; another Authority to administer the work of another Act. The growing number of Acts involving sanitary improvements, with their attendant authorities, resulted in an uncoordinated approach. There was a need for streamlining the whole approach to sanitary improvement not only in what was required but also how it was to be achieved with defined roles for local and Central Government. This had not gone unnoticed.

Interested Associations involved in medical and sanitary matters followed the work of Simon and his department and the views expressed by others. Wherever and whenever these Associations could prod the Government into comments or action, they did so. It was such agitation by the British Medical Association and the Social Science Association that led Disraeli's Government to appoint a Royal Commission to investigate the administration of sanitary matters [26]. This agitation resulted from the growing public interest in health and safety. An informed public was now demanding improved legislation, consolidation of existing legislation, conversion of permissive powers to compulsory powers and the rationalisation of local government to ensure proper administration and enforcement and effective central direction and

administration.

A change in attitude was occurring by 1868 from that which had forced the disbanding of the Board of Health in 1854 and 1858. Public opinion was now more receptive to any changes that a Royal Commission might propose. It was becoming accepted that Government interference in these matters was increasingly necessary.

The Royal Sanitary Commission

A change of Government resulted in the reappointment of the Commission in 1868. Its terms of reference were to investigate the operation and administration of sanitary law, the constitution and areas of health authorities and the certification of deaths in England and Wales [27]. Scotland, Ireland and the whole of London were not included in the areas to be investigated. Among the many matters that the Royal Sanitary Commission was instructed to inquire into were the laws relating to sewerage, drainage, water supply, control of building and the administration of these laws. References to building byelaws could include experience in areas other than England and Wales but the terms of reference of the Commission would not permit it to recommend a single building control system for the whole of the United Kingdom, simply because Scotland, Ireland and London were outside the area of investigation. If a building control system were to be recommended then it should be modelled closely on the London system to unify the two separate systems that had developed.

The Commission, under the Chairmanship of Charles Adderley [28], was appointed in April 1869 and the second and final report was presented in 1871. This, comprising some 386 pages, consisted of report, analysis and minutes of evidence, (other than the evidence given before August

1869 which was presented as a first report). It reviewed the existing sanitary laws, presented and analysed the evidence of 101 witnesses, and proceeded to recommend the amendment of law and restructuring of administration considered necessary to establish effective benefits for the population of England and Wales. The report, as far as the control of building is concerned was very influential in that the basis of building control in England and Wales today conforms to the recommendations established in the 1871 report. The ineffectiveness of existing legislation, due to the multiplicity of Acts and Authorities, was readily recognised [29].

From the Parliamentary Select Committee on the Health of Towns in 1840, Chadwick's report of 1842 and the Royal Commission on the State of Large Towns and Populous Districts, had stemmed some 19 Acts between 1848 and 1870 [30], many prompted by outbreaks or fear, of cholera, typhoid, and typhus. All the Acts dealt with some aspect of sanitary importance and were administered by some 700 District or Borough, Urban and Rural Councils, Boards, and/or Commissions. The power to make building byelaws was adoptive and of these Authorities which did adopt and make byelaws it appears that most were large ones where long-standing problems of high density and low quality buildings were causes of sanitary defects and disease.

Monetary loss because of public ill health was estimated at many millions of pounds per annum due to the increase of expenditure and the loss of work both by the sick and by those attending them [31]. The loss affected employers by loss of production and lower profits. The Commission recognised the economic importance of effective sanitary legislation necessary for civilised social life. The essentials named included:

1. The supply of wholesome and sufficient water for drinking and washing.
2. The prevention of the pollution of water.
3. The provision of sewerage and utilisation of sewage.
4. The regulation of streets, highways and new buildings.
5. The healthiness of dwellings.
6. The removal of nuisances, refuse and consumption of smoke.
7. The inspection of food.
8. The suppression of causes of disease and regulations in case of epidemics.
9. The provisions for the burial of dead without injury to the living.
10. The regulation of markets etc., public lighting of towns, etc.
11. The registration of death and sickness.

This list was not given in any defined order of priorities, but it does seem to be a list of preferences and the regulation of new buildings is placed high on it.

The administration of these necessities was, and still is, of extreme importance and the Commission stressed the importance of the established principle of Local Self Government. "Local administration, under central superintendance is a distinguishing feature of our Government. The theory was that Local Authorities should assume the widest possible responsibilities and that public expenditure should be chiefly controlled by those who contribute to it. Whatever concerns the whole nation must be dealt with nationally, while whatever concerns only a district must be dealt with by the district" (32).

Whilst the disadvantages of local administration were recognised, including the smallness of units, parochial attitudes and the administration of conflicting and disconnected laws, the Commission

nevertheless recommended that local administration should be simplified, strengthened and set in motion. Local Authorities that had adopted the Public Health Act of 1848 and the Local Government Act of 1858, had only experienced central supervision of building control matters since 1858, but the principle had now been firmly established thus strengthening the hold that Central Government had over how Local Authorities conducted themselves.

The regulation of new buildings was clearly a local matter as could be seen from those Authorities which had sought local Acts or had made byelaws under the Local Government Act of 1858, and were making an attempt to enforce them. The Commission did not wish to add or detract from those who sought the sanctity of private property. The national drive was to ensure that all Authorities had building byelaws of a uniform nature.

Amongst the 101 witnesses who gave evidence to the Commission on the subject of building byelaws and their administration, many mentioned the limitations of the system which brought about a lack of uniformity and incomplete control. Towns which had building byelaws were able to point out the beneficial results in comparison to other areas which did not adopt and make byelaws. The supervision required in the enforcement was considered by builders to be an interference. This resulted for example in Bradford Borough having to relax their byelaws for a time and for Oldham to modify theirs [33]. Uncertainty about validity was the main problem. Byelaws had in many cases been found to be "ultra-vires" i.e. beyond their power, and some courts had strained this rule against local boards. For this reason alone, some Councils did not enforce byelaws. Evidence was given that byelaws should be either a part of statute or receive Parliamentary approval or that when they were sanctioned by the

Secretary of State they should have the effect of law. Simon, in his evidence, stated that the Central Authority should have the power to make byelaws for any place where the Council refused to make them [34] and this the Commission accepted. However, the use of byelaws as a vehicle to achieve the desired standard of health and safety was not fully realised; Gauldie argues that byelaws were framed to protect property and not ensure health and comfort [35]. Certainly, the opposition to building byelaws had limited their effectiveness and local control.

The Commission recommended that building byelaws should remain as the instrument of control and that Local Authorities were, despite criticism, best placed to administer them. This was hardly surprising since the Commission had stressed the importance of local self government. The chaos of Authorities, and areas which the Commission was prominently aware of, played a significant part in the recommendations. In urban areas it was recommended that a single Authority, the Town Council, should exist. In rural areas the Poor Law Union was to be the area and the Board of Guardians the authority. These Authorities were to administer all matters of public health thus reducing the existing multiplicity of Councils, Boards and Commissioners. To oversee the workings of the Local Authorities, the creation of a new central sanitary authority was recommended. The partial and optional application of sanitary law was considered to be no longer admissible and it was considered that the superintendence given by the central authority must be made more effective [36]. The grip of central control would thus be tightened.

Rural districts did not have the same powers as town and urban authorities but the Commission considered that they should have the power to make and administer building byelaws. This proposal had a significant

impact in that it extended building control from those Councils who previously had the power to make building byelaws to the areas controlled by the proposed new Rural and Urban District Councils, thus all these local authorities could take an active interest in securing the construction of better houses. However there would be some differences in the way that control would be administered. In rural areas the deposit of plans was not considered necessary, neither should these authorities have the power to pull down non-conforming work, although they could prosecute for a fine. Such a recommendation would only add to the criticism of byelaws administration since Local Authorities would be expected to require the byelaw standard to be attained whilst being deprived of the power of effective enforcement. If the courts were sympathetic to the developer, Local Authorities would not even try to enforce as had been described in evidence to the Commission. This was an example of a compromise to allow the law to appease those who sought its protection at the same time limiting its effectiveness to appease those who would be affected by its enforcement.

The Commission recommended the widening of byelaw making powers by including the damp proofing of ground floors, in addition to walls, the drainage of building sites and the provision of earth closets. A further recommendation referred to providing satisfactory means of ingress and egress in all buildings used for public assembly. This important aspect of public safety was at last recognised but its implications were far reaching in that it could be applied to existing buildings as well as new constructions. This was the first step towards retrospective action and this principle was not to be easily accepted.

The enforcement of these matters was an important measure. Smaller Authorities would not have the resources, either financial or staff, to

ensure effective enforcement but as the Act provided Authorities with discretion to act or not, small Authorities would not act any less efficiently than some of the larger Authorities. Effective powers of enforcement were needed otherwise byelaws became meaningless, but to be enforceable they had to be clear and precise. John Liddle, M.O.H. for Whitechapel gave evidence to the R.S.C. in which he referred to a paper he had presented to the Association of Medical Officers of Health, in which he pointed out how the powers of the Metropolitan Building Act could be avoided. He described the case of a builder who had constructed two houses on a site which had open space at the rear of 100 square feet, the amount required for one house only by the Act. The builder was summoned to appear before the Magistrates but prior to his appearance he constructed a hole in the party wall and stated that the house was one house and not two. The Court accepted his argument and he was not prosecuted. Clearly the hole was effectively closed at a later date. The Act only applied to new buildings and Liddle gave a further example of how the Act could be avoided by carrying out alteration work to a new building. He referred to a builder who had taken down the front and rear walls and rebuilt them, removed the roof and rebuilt but at the same time building over the rear open space originally required by the Act for the circulation of air [37]. Such was the ingenuity of unscrupulous builders who frequently complained that they could not understand byelaws, or were not aware of them. But these examples show that some of them knew only too well, and highlighted the inadequacy of badly structured regulations.

The Commission was unable to give full consideration to effective building control simply because they were not able to enquire into the control of building in London. Not that such an enquiry was needed but it would have allowed the Commission to make a comparison between the two

systems. Thus a second opportunity to unite the building control system of London with that of England and Wales had been missed. Nevertheless, the Commission was keen to improve the current system which had functioned in some places extremely well. To maintain the same system meant status quo, the presence of Central Authority, the growing position of the professional, the emergence of the Government administrator, prompting and cajoling the Government into accepting professional solutions to the problems they were facing. To maintain the building bye law system meant the strengthening of the Local Government Office and the Commission's recommendations followed this pattern.

A Period of Consolidation 1871-1875

The report of the R.S.C. was accepted in full by Gladstone's Government in 1871. The Conservatives in opposition, led by Disraeli, also supported the report, having in the first instance set up the Commission in 1868. Three important Acts came from the report, the Local Government Board Act (1871), the Public Health Act (1872) and the Public Health Act (1875). In addition a further Public Health Act was introduced in 1874, which although relevant to building bye law control, was almost immediately repealed by the Act of 1875.

Public knowledge on the subject of public health and safety had advanced rapidly in the previous decade aided by Associations which had been formed for the advancement of such knowledge which produced a better understanding of the problems and the way to tackle them. The benefits of sanitary legislation, although limited in both content and application, had changed social attitudes and made them more responsive. The exponents of laissez-faire policy had a difficult task to destroy, delay or amend Bills based on the recommendations of the R.S.C. The very nature of the

task set for the Commission resulted in both a continuance and consolidation of sanitary law and enforcement.

The first Act emanating from the Commission's report was the Local Government Board Act of 1871 [38]. This Act created a Local Government Board to replace the Local Government Act Office, in which the consolidated central functions would be placed. This was the means by which central control would be enlarged and strengthened. The Bill became law on 18th August 1871. The new Board consolidated the staff from the Poor Law Board, General Register Office, Local Government Act Office and some of the staff of the Medical Department of the Privy Council. The Act did not pass without comment, the anti-centralists and sanitarians were still active and forceful in obtaining a delay in the Government's proposals [39].

The second Act, the Public Health Act of 1872, [40] created the basis for local sanitary organisation of the urban and rural districts to complement the existing Borough Councils. The structure, necessary to administer sanitary legislation, including building byelaws, was now beginning to take shape. The objections to the Local Government Bill in 1871 produced a cautious approach to the introduction of the changes needed. Lord Stanstead, the Minister responsible for the Local Government Board, did not fully appreciate the opportunities that existed for the speedy introduction of all the Commission's recommendations. The incremental approach allowed constant agitation by anti-sanitarians and anti-centralists to oppose the piecemeal proposals. Stanstead's weak leadership was the opposite of what the Commission had envisaged in an effective Central Authority.

A Public Health Bill, introduced in 1873 to amend the Public Health Act of 1872, had followed a previous Bill for the consolidation of the

sanitary law. At the same time the Government had sent a digest to all Local Authorities giving details of all the existing Acts and suggesting amendments as an interim measure before proceeding with an Act to consolidate existing legislation [41]. Consolidation of building requirements into a separate Building Act would have had the advantage of ease of understanding and enforcement. This would have met the demands of those who still advocated a separate Building Act. Such a demand came in March 1872, during a debate on the Fires Bill, [42] based on the report of the Fire Protection Committee of 1867. The Committee stated that although it was not possible to prevent fires, it was possible to insist on buildings being reconstructed so that, should a fire occur, the risk to life could be reduced to a minimum. A new Building Act should make it compulsory to require the floor between a shop and dwelling to have adequate fire resistance, similarly for larger shops with living accommodation over. Satisfactory ingress and egress should be provided to all public buildings, a matter that the R.S.C. had previously recommended, while stairways, passageways and corridors were to be constructed of fire resisting materials. The report commented on an increase in the number of fires due mainly to the increase in smokers and the use of matches. Reference was made to a previous suggestion for a tax on matches and the discussion in the House centred on this matter, whilst the technicalities of the fire resistance of building structures faded away as did the Bill and any hope of a Building Act.

A change in Government saw Disraeli and the Conservatives in power whilst Gladstone led the opposition. The new Government was obliged to implement the recommendations of the R.S.C. Slater-Booth, the new Local Government Minister, introduced the Sanitary Laws Amendment Bill in June 1874 [43]. The Bill was to amend and extend the existing sanitary laws

and included a proposal to broaden the scope of building byelaws both in content and administration. The Board of Guardians and the Rural Sanitary Authority were to become one and the same and the new Rural Authorities were to be allowed to make building byelaws for their areas. These bye laws had to be available for public inspection before and after they were approved by the Local Government Board (L.G.B.) allowing for objection in the first instance and awareness in the second. This was the first legislative move to introduce building controls in rural areas. Building bye laws were extended to control foundations, rainwater gutters, downpipes and roofs. The R.S.C. had not recommended the inclusion of roofs although the roof of a building clearly plays a major part in keeping it dry and if the building takes fire its roof can spread the fire from one building to another, either by radiation or the convection of burning embers. It seems surprising therefore that the standard of roof construction had not been included before, although many Borough Councils had these provisions in their Improvement Acts. Similarly foundations and rainwater pipes were not R.S.C. recommendations, but both have a great influence on the health and safety of occupants of buildings[44].

The Sanitary Law Amendment Act became law in July 1874, and although insignificant in comparison to some preceding Sanitary Acts, was very important in building control matters. Not only were the powers to make bye laws enlarged to cover important parts of building structure but enforcement functions and costs of remedial works were defined. Most significant were the powers for rural districts to make bye laws. Thus, for the first time buildings could be controlled throughout the whole of England and Wales. However, this Act did not become effective for no sooner was the ink dry, than the provisions were repealed by the Public

Health Act of 1875 [45].

The Public Health Act 1875

Disraeli had one more commitment to fulfil after his agreement in 1866 to enquire into, and where necessary, amend the Sanitary Laws of England and Wales. This was to consolidate the many sanitary Acts and the Bill for consolidation was introduced on the 11th February 1875 [46] by the president of the L.G.B., Mr. Slater-Booth who in referring to the need for consolidation spoke of the possibility of removing the permissive nature of the previous Acts. The Bill would be the most important measure the House would deal with during that session and the consolidation of 29 statutes was welcomed by sanitary reformers and lawyers, but what was not mentioned was the danger that the defects of previous Acts would be repeated. It was unlikely that these defects would be overcome as the Government had no intention of introducing new sanitary legislation [47].

During the committee stage, Stanstead, the previous president of the L.G.B., considered that many urban and rural areas were not capable of fulfilling the duties set out in the Bill. He thought that it was not possible to make the country healthy by Act of Parliament but by the willing and intelligent application of Local Authorities [48]. The criticism of Local Authorities previously expressed by Simon and other witnesses to the R.S.C. and by Hole tended to support these views. Certainly those Authorities who wished to maintain the privileged position of local self-government would find great difficulty in accepting an Act which provided agency characteristics with central direction and control. The principle would be enough to alienate those Authorities from the benefits of the Act which became law on the 11th

August 1875. The Act did not apply to Scotland, Ireland or the metropolis but it confirmed both mandatory and discretionary powers on Local Authorities in England and Wales. Simon considered that the provisions were not as forceful as he would have liked. The "duty" to enforce the law did not apply to the discretionary matters unless Local Authorities adopted the powers, and if those powers permitted a discretion of operations the exact extent of "duty" would be difficult to define. Such was the situation concerning building byelaws. Only Borough and Urban Authorities were permitted discretionary powers to make byelaws. Rural Authorities no longer had that power, the powers of the Sanitary Amendment Act of 1874 had been repealed. This discretion enabled many Local Authorities not to adopt byelaws, particularly those who had not done so previously and consequently building construction continued to be controlled in a haphazard, inconsistent and unco-ordinated way.

The technical content of byelaws was enlarged to apply to the structure of walls, foundations, roofs and chimneys of new buildings for securing stability, the prevention of fire and for the purposes of health, space about buildings, drainage, water closets, earth closets, privies, ash pits and cess pools [49]. Further byelaws required builders to give notice and deposit plans, and Local Authorities had the power to inspect the work and enforce the required standards [50]. These new powers could not be applied to buildings retrospectively [51], therefore the insanitary condition of existing houses would have to be dealt with by other legislative means.

The powers to make byelaws did not cover all the matters considered important by the R.S.C., for example, dampness in walls, floors and building sites were not included. The provisions for securing adequate ingress and egress in public buildings had also been omitted. These

matters had not been included in any previous Public Health Act and consequently could not be included as a consolidating measure. However powers to enable Local Authorities to deal with dangerous and dilapidated buildings, previously included in the Town Improvement Clauses Act 1847, became incorporated in the new Act [52]. Enforcement powers were improved but they were still worded in such a way that inefficient Authorities might fail to work within a legal framework. Thus a deceitful builder and inefficient Local Authority together could result in the perpetuation of jerry building.

The mandatory parts of the Act where Authorities had no discretion were to ensure that all buildings were constructed with adequate drainage connected to a sewer providing it was within 100 feet. Where this was not possible drainage to a cess pool had to be provided [53]. Building over a sewer was prohibited unless the Authorities agreed. New houses had to be provided with satisfactory sanitary accommodation [54]. The provision of mandatory and discretionary powers did little to help the uniformity of application and enforcement which was one of the principle aims of the sanitary reformers and administrators. Central control had been strengthened and given the skills and encouragement; the Act was a step in the right direction.

The Act of 1875 has been described as a great Act [55] and in terms of consolidation and amendment it was great, but this was due to the excellent foundation provided by the report of the R.S.C. and to the untiring efforts of sanitary reformers, supported by Simon and of the dogmatic Chadwick before him. Consolidation was necessary due to the incremental approach to sanitary improvement. It also enabled a review of the old laws, ironing out the difficulties experienced in their administration and making necessary amendments. A consolidated Act

emphasises the importance the Government attaches to its contents, but no Act is good if it cannot be properly administered and the importance of the 1871 and 1872 Acts in providing more effective control and local administration should not be overlooked.

As for the control of building the 1875 Act did not provide any significant advancement. The factors that gave rise to indifferent control were allowed to remain. These factors were of major concern to the building industry, property speculators and even central Government. Despite this, Local Authorities could still exercise discretion not to adopt byelaws. They could seek and often obtain modification of model byelaws, they could seek, obtain and administer Improvement Acts and they had freedom as to the quality and quantity of staff resources to administer this Act. Despite the strengthening of central control this was insufficent to remedy these problems, even the restructuring of Local Government would not improve the administration where vested interests could still influence and possibly dominate local administration. The 1875 Act did not provide legislative controls on all the issues raised by the R.S.C. but nevertheless was an incremental step in the growth of the building control system and further legislation was still needed to ensure that buildings would be constructed that would not be prejudicial to public health and safety.

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(28) SIR CHARLES BOWYER ADDERLY - 1st Baron Norton 1814-1905. Educated Bristol and Christchurch Oxford. Sought to develop his property on enlightened principles. The estate of Saltley near Birmingham grew from 4,000 to 27,000 population. He helped to plan the street layouts to avoid slums and could be said to be the father of town planning. M.P. for North Staffordshire in 1841 retiring in 1872. Advocate of Local Self Government. Responsible for first Local Government Act, the term Local Government being his own invention. In 1866 becames Secretary to the Colonies, carried through the British North American Act creating the Dominion of Canada. Chairman of Sanitary Commission in 1871 and president of Board of Health 1874. Passed Bill on merchant shipping which specified the "load line" usually attributed to Plimsole although claimed by Adderly. On retirement in 1877 he assumed the title of Baron Norton and spoke in the Lords on Education and colonial matters. Refused the Governorship of Bombay - Concise D.N.B. 1901-1907, p.5.

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(41) HANSARD 3rd Ser. vol.277, (29th May 1873), 2nd Reading of the Bill.

(42) HANSARD 3rd Ser. vol.209, p.1886 (13th March 1872).

(43) HANSARD 3rd Ser. vol.219 (2nd June 1874).

(44) The addition of control on roofs and rainwater was not retained as there were controls that came into operation after the R.S.C. had reported. Accordingly they were not incorporated in the recommendations. They were discarded in the process of consolidation.

(45) P.P. The Public Health Act 1875, 38 and 39 Vict., C.55.

(46) HANSARD 3rd Ser, vol.222 (11th February 1875).

(47) HANSARD 3rd Ser, vol.223 (19th April 1875 - 2nd Reading of the Bill).

(48) HANSARD 3rd Ser, vol.224 (25th May 1875), Committee Stage.

(49) P.P. Public Health Act 1875, 38/39 Vict (Section 157).

(50) Ibid. Section 158. Where the Authority incurred expense in the removal of faulty work the cost could be recovered from the person who caused the contravention. These powers would not be available in respect of contraventions which occurred 12 months or more before action for removal was taken by the Authority.

(51) Ibid, Section 157.

(52) Ibid, Section 160.

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(54) Ibid, Section 36. The provision of a water or earth closet, privy or ashpit was compulsory. These were powers retained from the Public Health Act 1848.

(55) FRASER W.M. A HISTORY OF PUBLIC HEALTH 1834-1939, London 1950, p.177.

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CHAPTER 5

BYELAWS AND THE ANTI-BYELAW LOBBY

The restructuring of Central and Local Government administration together with the consolidation of public health law gave greater central control of the building control system and also provided a new impetus to Local Authorities to update existing byelaws, or to adopt new ones based on the wider areas of control provided by the 1875 Act. As we saw from the last chapter these improvements, necessary and welcomed as they were, did not overcome the inherent defects in the system, namely discretion to adopt byelaws, the specific nature of these byelaws and their application and enforcement. These defects would continue and it is interesting to look at both the way that resistance continued to build up against the byelaw system and the means that were sought to maintain a balance of control and acceptable building standards.

A positive contribution to the uniformity of byelaw requirements was the introduction of a model code by the Local Government Act Office (see page 80). This move was reinforced by the new Local Government Board (L.G.B.) who with some assistance from the Royal Institute of British Architects (R.I.B.A.) produced a model set of building byelaws. Local Authorities were encouraged to adopt the model byelaws either to amend the existing ones or preferably replace them completely. A circular to this effect was issued by the L.G.B. on 25th July 1877. The model set contained 94 byelaws on the same principle as earlier ones, being for the guidance in the preparation of byelaws for L.G.B. approval. These byelaws described requirements for widths and gradients of new streets including footpaths and prohibited the erection of buildings on sites filled with

offensive materials. Oversite concrete was required to be 6" thick or alternatively a layer of asphalt used. Foundations and wall sizes were taken from the London Building Acts, while the space required about buildings was set at 24 feet at the front, to the centre of the road, and 150 sq.ft. at the rear. The requirement for open space at the front was in addition to street widths required by street byelaws and this resulted in many houses having a small front garden; for example where street byelaws required an 18 ft. wide road with two 6 ft. footpaths buildings would have to be 30 ft. apart but the open space byelaw required 48 ft. between houses thus leaving a 9 ft. long front garden to each house. The depth of rear open space varied according to the height and width of the house and the space was to remain clear apart from small structures such as porches, W.C.s and steps. Habitable rooms had to have a window of a size equal to 1/10th of the floor area, half the window had to open. Rooms without a fireplace had to have a ventilation shaft of an area not less than 100 sq.in. Damp sites had to be drained by subsoil drainage and no drains were permitted to pass under a building without being suitably protected, by being covered with concrete for example, and with ventilation provision at both ends. Water closets had to be placed against an external wall with permanent ventilation being provided by means of an air brick and an openable window of a minimum size of 2 ft. by 1 ft. These requirements together with many others made the model byelaws a comprehensive working document which, although specific was informative. It provided speculative builders with a code of basic building construction which if closely followed would enable them to construct sound houses of a reasonable standard (see Appendix 11).

The model was also helpful to Local Authorities and enabled them to set byelaws comparable with neighbouring authorities, producing

standardisation of requirements which would ultimately assist in standardising building materials and components. It was inevitable that the byelaws would clash with some traditional materials and construction methods and we have seen examples of how authorities were pressured into seeking variations to allow the use of local materials and methods to continue despite the risk to health and safety (see page 81). The model byelaws presented an alternative to a National Building Act and if widely adopted and enforced with some degree of uniformity and professional skill, they could easily have had a national effect. A major advantage was the relative ease with which byelaws could be altered, either at the request of the Local Authority, the recommendations of the L.G.B., or due to technological change or political pressure. Local Acts did not have this ease of change but this did not prevent Local Authorities from continuing to seek and enforce their own Improvement Acts. Liverpool, which despite adopting building byelaws, continued with this form of control and secured a new Building Act in 1882 and in doing so took the opportunity of ensuring that some sections were compatible with the model byelaws. This helped to reduce any criticism that could be made against indifferent standards but more important it provided Liverpool with almost the same powers and without the controlling interference by the L.G.B.

Nevertheless, old byelaws remained. The town of Barnstaple adopted byelaws for the first time in 1875, based on the provisions of the 1858 Act. They consequently became out-moded when the new model was produced by the L.G.B. (see Appendix 9). Despite the 1875 Act and the new model, different byelaws, Improvement Acts and enforcement standards continued much to the annoyance of the builders and sanitary reformers alike. These criticisms were reinforced during the evidence presented to the Royal

Commission on Housing of the Working Classes [1] in 1885. The Commission took evidence from 188 witnesses amongst whom was the ever forward-looking Edwin Chadwick. On this occasion Chadwick, who had developed an interest in the wider uses to which concrete could be put, advocated that the technology of house construction could be improved considerably by the use of concrete even to the extent of building complete houses.

New Technology

The use of Portland cement had increased the strength and desirability of concrete quite considerably. It had a tensile strength when mixed neat with water of 400 lbs sq.in. after 7 days and 500 after 28 days compared with 202 and 183 of Roman cement and 298 of Medina cement. When mixed with sand the strength would fall but the Portland cement mixture would be about 15 times stronger than the other cements[2].

Lime cements were even weaker and had the problem of not setting in damp soil. Consequently they had little value other than for simple hardcore and were frequently used as a matter of custom. Roman cement was made from calcining nodules found in London clay and Medina cement from the septaria found in Hampshire and the Isle of Wight. Similar cements were made in other parts of England from similar types of soil. Portland cement, named because its grey colour resembles Portland Stone, is made by calcining a mixture of chalk and clay, giving a mix of about 60% lime, 22% soluble silica and 12% alumina plus small amounts of oxide of iron and magnesia. Mixed with sand and stone aggregate, hydrated by water, a good strong concrete is produced. Likewise its use with sand as a mortar increases the strength of brickwork allowing it to carry greater loads.

The traditional use of weak lime concrete, or the slightly stronger

Roman cement concrete, and awareness of their weaknesses and limitations had left a nervous acceptance of the use of Portland cement since its introduction around 1840. Concrete was mainly used for making foundations and with the use of weaker cements it was necessary for the base of the wall to comprise brickwork footing spreading the load of the wall over almost the whole width of the concrete for fear of the wall loading being able to compress, crush or shear the concrete. Whilst Portland concrete was strong enough to support the wall without footings, byelaws were still being made permitting the use of non-Portland cement concrete and consequently retaining the requirement to construct costly brick footings. The conservative and traditional attitudes of the building industry contributed to the retention of this byelaw but the advantages of Portland cement concrete both constructionally and economically took some time to be accepted and it was not until 1912 that model byelaws allowed the use of cement concrete of sufficient thickness to replace the need for footings on a 9" wall. 1928 saw the removal of the need for footings to all domestic walls and an indication that the Minister of Health would be likely to agree a similar modification for all walls if anyone proposed it. Despite these provisions the byelaws retained the clauses permitting the use of lime concrete and footings to walls (3).

The use of Portland cement did not stimulate an instant change in the byelaws, firstly there had to be time for the new material to prove itself. Failure would most likely result in a byelaw restricting its use, but in this case the cautiousness of the building industry and its conservative approach to changes in traditional methods meant that there was insufficient political pressure to force a change and insufficient scientific testing and assessment of this material to encourage change.

Concrete technology had not been limited to its use in foundations.

The extra strength that Portland cement had provided enabled concrete to be used for not only the ground floors of industrial buildings but also at floor levels above ground floor. The compatibility of concrete and steel to work together and maintain a working bond was generally recognised allowing strong floors to be constructed permitting heavy machinery to be used in upper floor levels resulting in larger and taller buildings and for the industrialist increased production with corresponding financial returns. Another important quality was that the alkali in the cement would protect the steel from corroding while the concrete around the steel gave a fire resistance. Consequently the use of steel frame work floors with concrete infill soon became recognised as fire proof construction. However, not all the designs were fire proof as in some the steel work was totally or partly exposed allowing the steel to move under high temperatures that could arise from industrial or warehouse fires permitting unacceptable deflections and total or partial collapse. Despite the advantages of good concrete and steel design no byelaws were made as to the stability of an industrial floor or its ability not to collapse in the event of a fire, as the provisions of the 1875 Act did not permit this. The byelaws concerned themselves with the ability of external walls to carry loads and to resist the effects of a fire and the latter applied also the roof. This did restrict the spread of fire and therefore was a measure to protect other property. Not a lot of concern or attention was given to the safety of people in or around the building. Further developments in the use of concrete were taking place. This was the reinforcement of concrete by the use of small diameter steel bars which would accommodate the tensile loads allowing the concrete to maintain its integrity by accommodating compressive loads. A Newcastle-upon-Tyne builder, William Wilkinson patented a system

using discarded wire rope from a colliery hoist draped through the concrete floor and inserted hollow clay pipes at mid span to reduce the weight of concrete. This method was used in practice and found to work quite satisfactorily[4]. A twisted metal bar was developed in America in 1884 which improved the bond between concrete and steel. The Frenchman, Francois Hennebique was also working on the development of reinforced concrete. His method of resisting the tension developed in the concrete by turning up the ends of the reinforcing bars was patented in 1892. He designed the first reinforced concrete building to be erected in Britain, Weavers Mill at Quay Parade, Swansea, a six-storey building with a 14' cantilevered part over the loading bay. The building was completed in 1897 and remained in use until 1966. It was a good example of the developing building technology of the late Victorians. The building was demolished in the early 1980s to make way for a supermarket. Reinforced concrete was used for the structural frame of Britain's first skyscraper, 167 ft. high building topped with a clock tower, overall height 310 ft., the Royal Liver Building in Liverpool, designed by Louis Gustave Mouchel, Hennebique's representative in Britain [5]. This was an example of the changes taking place in building technology. It was not a cheap alternative to the traditional forms of construction but provided another way of producing larger buildings capable of supporting greater loads over bigger spans. This was necessary to achieve the floor areas required to accommodate the ever-increasing use of machinery within factory buildings and the more economical use of labour, materials and land.

Byelaws were not able to control this type of building, the 1875 Act did not provide for it. Reinforced concrete is a material which requires careful design and good workmanship if failure is to be prevented, yet no minimum working stresses had been defined to be used in

steel and concrete as to avoid structural failure. Of course, failure was the last thing in the minds of those designers and builders who wanted to impress developers and Local Authorities about the virtues of this new material, consequently the possibility of failure was somewhat remote but it does show how the lack of accommodating legislation restricts the use of new materials and methods of construction.

The construction of a house using concrete throughout in Paris in 1862 (6) was the type of housing development that stimulated Chadwick to advocate its use in housing. To exploit concrete for this advantage Chadwick suggested the formation of building companies (7). However industry was not as sure as Chadwick and although progress was made in the prefabrication of concrete products, industrialised concrete houses were a long way off. However, the point had been made that to take economic advantage of new materials and methods byelaws should be flexible, provided the health and safety aims were met. But as long as byelaws retained an approach to the protection of property and were reactive in their development and inflexible in their application, they were not likely to be helpful in the acceptance of new ways of constructing buildings which were able to meet the needs of their occupiers. This situation could have been improved in the way Local Authorities undertook their responsibilities, but the attitudes of many received a lot of criticism.

Outside of London, it was alleged that there were instances where Town Councils were dominated by builders' and property speculators' interests (8) opposed to the introduction of byelaws or indeed any restrictions on speculative property development. In other towns, influenced but not so dominated by vested interests, byelaws were less strictly enforced than they should have been (9). Thus, while speculators

and jerry builders were the main cause of inadequate houses, the non-enforcement of byelaws could also result in defective sanitary arrangements, drainage and poorly constructed building.

These attitudes paralleled the effectiveness of byelaws. Witnesses considered that in some towns byelaws were too stringent [10] while in others they were found adequate in controlling materials and open space[11], but the effectiveness also depended on the way byelaws were enforced and this was largely the role of the surveyor. Byelaws in Birmingham were reported as satisfactory in that they had stopped jerry building by requiring the inspection of buildings under construction. At least five inspections of each building were carried out by Local Authority surveyors before being passed [12]. Surveyors employed to enforce byelaws were extremely active but evidence suggests that in many towns the amount of building work subject to control was beyond their staff resources to inspect. Many surveyors where found incompetent and were dismissed. Surveyors in London were considered to be more competent than those working in the provinces but in many Authorities surveyors had to work against local influences, such as vested interests, and this restricted their performance. The variety of building standards and indifference to the enforcement of byelaws was the chief consequence of the existing laws being permissive rather than compulsory, a view previously expressed by Simon and emphasised by Chadwick and other witnesses [13] suggesting that Central Government should carry out the enforcement of Acts and byelaws [14]. On the other hand if all the Acts and regulations were enforced by Local Authorities most problems arising from bad sanitation would be removed but the difficulty was that provincial Authorities exhibited considerable apathy about enforcing the law. These criticisms could not and did not go unnoticed. The expanding

role of the Local Government Board in advising not only on byelaws but housing and many other sanitary aspects, was also an expanding bureaucracy. It was no longer simply advising Ministers on the technical matters and sanitation it was also the administration. Consequently administrators began to control the higher levels of Government Departments. Simon had found that direct access to the Minister, to which he was still entitled, was now restricted as was his other work, by the constant intervention of John Lambert, the first permanent Secretary to the Local Government Board. Lambert had quickly created a bureaucratic environment within the Board which would not respond to Simon's demands. Consequently he became disillusioned with his role and this finally led to his retirement on May 25th 1876 at the age of 59. The responsibility for public health and safety, after Simon, passed from the sanitarians to the administrators. The technical expert was relegated to a secondary role, an unfortunate situation that has continued to the present day. Such was the growth of central control over Local Authority matters that administrators had taken the role of directors assessing needs and seeking solutions from technical officers and other interested organisations. In building control matters this would mean determining the areas where byelaws would be of assistance, framing the technical solutions into byelaws that could be administered and recommending them to Local Authorities for their adoption. Despite this approach Simon considered that the law was framed in such a manner that it enabled Local Authorities unlimited licence to inflict insanitary conditions with impunity. The discretionary provisions of the Public Health Acts, of which building byelaws was one, allowed acts of wilful neglect to cause injury or endanger public health for which compensation should be paid.

The Public Health (Amendment) Act 1890

The Local Government Board, taking note of the observations expressed in the report of the Royal Commission on Housing of the Working Classes also took consideration of the recommendations of the R.S.C. which were not enacted in the 1875 Act. This resulted not in any simplification of that act but a further consolidation which incorporated local Improvement Act provisions. The advantage was that many other towns could use improved byelaw making, and other building control powers without the expense of seeking private Acts. It also enabled a reduction in the proliferation of Improvement Acts minimising variety and indifference of control yet at the same time strengthening the role of Central Government.

The Public Health (Amendment) Act 1890 [14] extended byelaw making powers to include the construction of floors, hearths, staircases, height of habitable rooms, paving to adjoining buildings, open space in connection with dwelling houses and the provision of sufficient water for flushing of water closets. Local Authorities could now prevent alterations to buildings which had previously been erected in accordance with the byelaws. This covered the loophole which had been highlighted by Liddle in his evidence to the R.S.C. (see page 102).

In addition the findings of the House of Commons Select Committee on fire protection 1867 had not been overlooked. The Fires Bill (1872) which had rekindled concern on emergency provisions in public buildings, previously expressed by the R.S.C. had prompted the inclusion of the St. Helens Act provisions requiring satisfactory ingress, egress, passageways and gangways in public buildings as Section 36 of the 1980 Act. There were 28 model byelaws prepared by the Local Government Board [15] (see Appendix 12) that could be adopted as a result of this Act. This related

to secondary means of access for removal of refuse; sizes and spans of timber in floors and roofs, including roof battens for laying and fixing tiles, sizes and spans of timbers for floors of public and warehouse buildings, the size of floorboards and the provision of bridging or strutting the joists. Staircase standards for domestic, public and warehouse buildings were described (e.g. the standard for domestic staircases were 8" tread, 9" rise, 1¼" strings, 1" thick treads, 3/4" nosing and the provision of a handrail) the heights of rooms in roof spaces could now be required at 9' over two thirds of the area of the room measured at a height of 5' above floor level whilst in other rooms the room height could be 8'. These byelaws now covered matters of detail, timber sizes in particular, increased room heights and staircases. All these requirements would add to the cost of house construction, especially in areas not used to such control. Although the additional requirements were considered necessary the specific detailing of structures to small dimensions less than an inch did not provide any room for flexible judgements in control terms, consequently resistance to them was bound to arise. These model byelaws were again orientated towards traditional forms of building construction. They did not attempt to control steel and reinforced concrete, although byelaw making powers for such control now existed.

Between 1860 and 1882 some 1000 urban and 600 rural Authorities had adopted some byelaws. Not all of these Authorities had adopted the 1877 or 1840 model byelaws, many retained the byelaws made under the 1858 Act whilst others had no byelaws at all. This was most common in rural areas which had limited powers of adoption and those that did not use those powers were most difficult to persuade [16], but those that did cause the reaction expressed in objections to the R.S.C.[17]. Rural

Authorities adopted byelaws that were structured for urban situations and seemed to act rather eroneously when applied to rural development. The growth of this type of byelaw in rural areas resulted in the landowners fighting back.

The application of building byelaws to urban style development could be appreciated but did not seem so apparent when applied to isolated and sporadic development. A surveyor, J.L. Green, expressed resentment and objection to byelaws in rural areas in his book about country Cottages [18]. He aptly described the construction, layout and sanitation of country cottages which had been built on the large estates of such owners as the Dukes of Bedford, Westminster, Rutland and many others. In 1850 the cost of estate houses was between £160 and £200 renting at about 1s 2d per week. The cost of repair was £20 to £30 per annum. From these figures it was clear that the net return was not profitable. It was alleged that to comply with byelaw standards construction costs would rise and this was strongly objected to. These costs compared with speculative housing in Leeds and Halifax for between £150 and £200 [19], whilst back-to-back housing cost about £110 [20] which was the average price of a terraced house in London [21]. These prices included the cost of the land and furthermore the volume of speculative building could attract the discount cost of bulk buying which added to the profit margins. Whilst Green took account of the economies of estate development he concluded that due to good construction and sanitation of estate cottages building rural housing to the standard required by byelaws was in many instances unnecessary and in the public interest undesirable [22]. Green's views cannot entirely be substantiated. Thus, whilst the better cottages on the Duke of Bedford's estate, constructed before the introduction of byelaws, remain to offer

good and attractive housing, many of the cottages, some of which can be seen in the village of Ridgmont near Woburn in Bedfordshire, were built to byelaw standards (see fig. 16). These houses, having 9" thick brick walls, tile roofs and basic sanitation were structurally capable of modernisation in the 1960s and are still providing good housing. This would not have been the case if the walls had been only $4\frac{1}{2}$" thick as advocated by Green. Such is the long-term economic benefits of good housing standards to which building byelaws contributed.

There was a similarity between philanthropic industrial developers and paternalistic estate owners. Daunton points out that by providing better housing a more contented workforce would become more productive, without affecting the basic relationship of capitalist production. It was a development in social responsibility in an advancing industrial economy[23] as was the introduction of building byelaws. This should have resulted in some degree of harmony instead of resistance but the objections to both cost and compulsion were widespread. Previously it had been the industrial, commercial and property speculators of the urban areas who had been challenged with byelaw control. The jerry building and property speculation by landowners and farmers, although previously questioned, had not been effectively challenged. This had now changed.

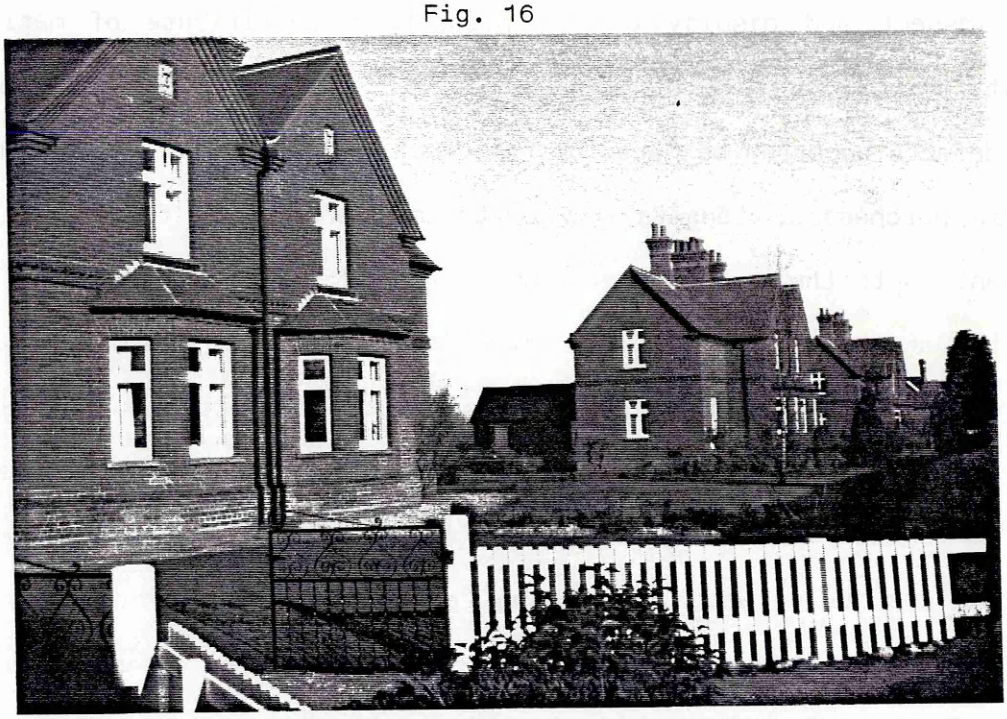
R. MacDonald-Lucas, Chartered Architect, practising in the Southampton area, experienced great "frustration" in obtaining approval of plans which he deposited with the South Stoneham Rural District Council. This frustration and anger led to a series of articles in the Southampton Observer and Hampshire News [24]. Lucas took the same line as Green, criticising the byelaws for their inability to cover traditional construction and to take into account new technologies. The use of concrete, apart from foundations, and reinforced concrete was not

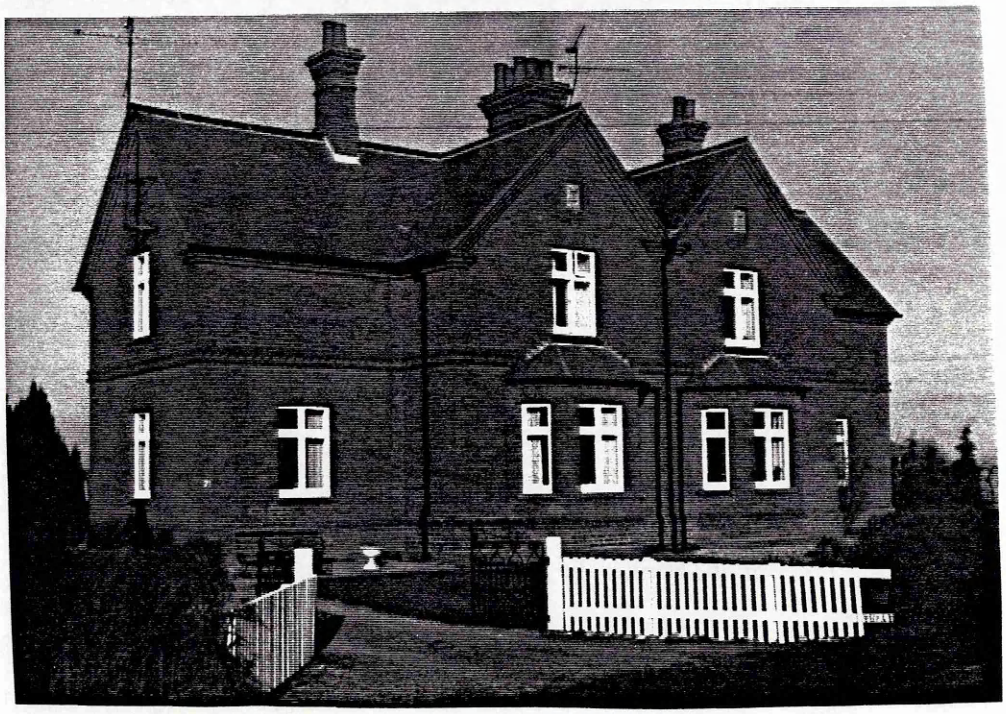
recognised by the byelaws and those relating to walls of brick, stone, etc. ruled out the use of timber frame [25]. The problem, as we have seen, with the byelaws was that they were specific in their requirements rather than relating to functional or performance standards that could be interpreted and applied. Specific byelaws were easy to apply, performance standards and functional requirements required a higher level of skill to enforce and this was an area where Lucas was extremely forceful in his views.

Lucas, like Chadwick before him, chose also to discredit the standard of surveyor appointed to enforce byelaws. In his experience with South Stoneham R.D.C. the "evil" of the system was the surveyor, "an official required by the 1875 Act, who approved the plans and who in some cases combined the qualifications of a coster with the authority of a censor" [26]. Lucas considered that byelaws should contain a rule that the person holding the appointment of district surveyor should be competent to understand plans and be conversant with ordinary methods of construction.

Whilst citing building byelaws as a curse and supporting those who advocated their total removal, Lucas recognised the forces supporting a form of control that resisted the onslaught of "jerry" builders [27]. Therefore he put forward an alternative form of control as a schedule of instructions to intending builders, written as far as possible, in plain English. Lucas considered every person who built should be in possession of a copy and the district surveyor of the Local Authority should be able to give advice when required. The builder would have the discretion to accept or ignore the advice upon which he would proceed to build and subject to reasonable inspection be left alone by the district surveyor until the building had been completed. Before occupation, the surveyor

Fig. 16





Housing on the Duke of Bedford's estate in the village of Ridgmont, Bedfordshire, constructed in 1911. These houses are well constructed, as earlier estate housing which can be seen in the village, and having modern fittings installed during the 1960s provide good housing. This would not have been possible if the main walls had only been 4" thick as advocated by Green.

would inspect and display on the property a certificate of merit or demerit. The certificate of merit would be renewable every 5 years and where defects occurred be noted on the demerit certificate. This would be read by purchasers, tenants and mortgagees who would form their own judgement as to the relevance and importance of these defects. Only if a property was unsafe, presumably capable of collapse, was it to be demolished or remain empty. In addition, Lucas suggested that builders should have a right of appeal if they held differing views from those of the district surveyor whose judgement should be final in cases where the appellant was judged wrong. According to Lucas, the surveyor would have to be a qualified person, a requirement which would weed out many persons holding such office, no doubt including the then surveyor of South Stoneham R.D.C. Lucas's criticism added further weight to the views previously expressed about the professional standard of surveyors appointed to enforce building byelaws. His proposal however would not prevent a building being erected contrary to the interests of health and safety, which was the purpose of the building byelaws. The discretion Lucas proposed the builder should have was far too wide. All builders could, at their discretion, knowingly erect faulty work and the cost of correcting that work including any demolition cost would ultimately fall on the owner. The architect, builder, and developer, would have long since gone from the site.

Lucas's articles were attacked as ineffective and incapable of being administered by law (28). They provided no legal basis for enforcement or indeed inspection and consequently the whole scheme for offering some degree of public protection on health and safety would fall to the ground. The basis of the proposals was nothing more than a gentleman's agreement and it was well known that jerry builders are no

gentlemen. Lucas staunchly defended his propoasls but his motive of removing building byelaws, especially in rural areas, was well known. He was a member of a delegation to the President of the Local Government Board in November 1904 when a proposal for the abolition of building byelaws in rural areas was put forward. The President of the Board, Mr. Walter Long, made it clear that building byelaws were a necessity and that the proposal could not be entertained. The delegation, who were members of the Building By-laws Reform Association, were not subdued by this rejection and the campaign continued with the aim was of securing a change in the form of building byelaws in rural areas. The Association used the term "by" as opposed to "bye", a different spelling of the same meaning, the origin of which has already been discussed (see page 70). Sir William Chance, a founder of the Association, in 1902, reflects that he had heard it said that the only reform the Association had achieved was the deletion of the "e" from the word bye [29], although as we shall see the Association did not even achieve that.

A considerable number of objections to the byelaws stemmed from the fact that Rural Authorities, who were able to adopt byelaws as a right due to the provisions of the Local Government Act of 1894, were offered the Urban Model Byelaws by the Local Government Board as a basis. The fact that these rural areas had no previous form of building control, seemed a curse to many builders and architects [30]. The Building By-Laws Reform Association considered that to seek the abolition of byelaws would be a waste of time and effort and that their energies would be better spent seeking amendments and alterations so as to provide a more elastic approach in administration and to remove the injustices and hardship that byelaw enforcement inevitably inflicted [31].

This approach would require byelaws to be more functional than

specific thus allowing interpretation of their requirements. However, this would require a more professional standard of administration, an approach which would not be welcomed by the Local Government Board, as it would mean a lowering of the demand for their services in the advice that they gave to Local Authorities. The Board had responded to the criticism of onerous byelaws in rural areas and their solution had been to prepare a series of model byelaws for use in rural areas (see Appendix 14). These had been available for adoption by Local Authorities in 1902 but very few had done so.

The agitation against byelaws in rural areas, by the Reform Association, led the Local Government Board to issue a circular to Rural Authorities in January 1906 [32] informing them of the objections that had been received concerning the adoption and enforcement of byelaws intended for use in urban areas. The circular encouraged the adoption of model byelaws for use in rural areas.

The 106 (and parts of another 32 Authorities) who adopted these byelaws seemed to be enforcing them satisfactorily. Rural areas which had urban characteristics could be dealt with separately if such areas could be defined. The Board could not enforce or insist, only recommend rural Authorities to review their position and where desirable adopt the rural Model. The Board assisted by providing the appropriate forms to enable the revision of byelaws and to supply information if required. The contents of the rural Model were limited to the structure of walls and foundations of new buildings for purposes of health; space about buildings to secure a free circulation of air; the ventilation and drainage of buildings; water closets; earth closets; privies, ashpits and cess pools. There were also powers to close buildings unfit for human habitation and to enforce the observance of the byelaws by requiring

notices and plans [33]. These demands were less than the byelaws could have made under the Local Government Act of 1858 which also included provision to make byelaws in respect of the stability of buildings and prevention of fires. The latter were now excluded from the rural Model, and with the omission of the principle of safety the trend of expanding building byelaw control was reversed.

These provisions reflect the concern of the Local Government Board and the introduction of rural byelaws was their way of maintaining control over the system. What it did show was the easy way that byelaws could be up-dated or changed in response to pressure, but we have previously seen it was a more flexible approach than local Acts, many of which were still in force. The problem was getting Local Authorities to respond to the need for change.

The Reform Association considered the rural Model in detail and recommended alterations to many of the byelaws. These recommendations were accepted by the Local Government Board and incorporated into a new rural Model [34]. This co-operation was much appreciated and the Chairman of the Association gave credit to the Board for making every effort to persuade Local Authorities to adopt the new code. The Association considered that in many respects their work had been done for them but, as many Rural Authorities were reluctant to adopt the new model, although it contained less demanding requirements, legislation was still necessary to effect the change. The Association proceeded to draft a Bill and a model code of byelaws which was introduced as a Private Members Bill into the House of Lords by Lord Hylton on the 1st March 1905 [35]. The Bill, known as the Public Health Acts (Building By-Laws) Bill, was intended to amend the Public Health Acts with respect to building byelaws in rural districts in England and Wales excluding London.

The Association recognised that the administration of the London Building Act of 1894 was carried out without much complaint [36] and the larger towns and urban areas needed a more comprehensive set of byelaws, but in rural areas there was not the need to have such extensive control. Accordingly, the Bill was small containing only five clauses dealing with:

1. The applications and extent of the Act;
2. Exemption of certain buildings;
3. Alterations to exempted buildings;
4. Power of Local Government Board to extend the provisions into urban areas;
5. Procedure of persons aggrieved by the byelaws.

The exemptions proposed in respect of isolated buildings was complete apart from byelaws relating to drainage and sanitary conveniences. A block plan would have to be approved but above ground the builder would be free to build as he pleased provided he did nothing contrary to public health regulations. The isolation of properties would ensure the benefit of not overcrowding dwellings and provide labourers and artisans with good space for gardens. Alterations and extensions would be subject to the submission of plans and approval including alterations to boundaries so as to decrease the area below that permitted as an exemption and where this occurred the exemption would cease to exist. The Bill could be extended into urban and borough areas on application by the Local Authority or by one tenth of the rate payers of the district, such orders could also be revoked by the same procedure. This was one way in which the Reform Association sought a reduction of byelaw control in urban areas. The appeal system was included so as

to allow aggrieved persons to appeal through the courts.

Lucas, who was involved in the preparation of both the Bill and the byelaws, was able to incorporate many ideas which had been expressed in his articles, although the end product was somewhat tempered from his previous radical solutions. It was considered desirable that some byelaws should be applied in all areas but keeping the Bill small was one way of minimising objections and getting approval. Lack of Parliamentary time meant that there was no chance of the Bill becoming law during that year. However, the Lords passed the Bill[37].

Underterred Hylton reintroduced the Bill in March the following year. In his introduction he said that the Bill sought to encourage the construction of suitable detached and semi-detached houses of cottage type for the working classes, freeing them from the onerous and tyrannical conditions imposed by byelaws which were intended for the crowded streets of cities [38]. Hylton added that the Bill would permit the use of materials other than brick and would overcome the reduction of room sizes proportioned to window sizes. He did not state the alternative solution viz, an increase in window sizes to provide better ventilation, or that it seemed not to be objectionable for roofs and walls to let in rain, but went on to add that the Bill would not permit the construction of cheap and nasty houses. As the Bill related only to detached and semi-detached houses, jerry builders would not so easily be able to take advantage as this development was invariably of terraced houses on small plots. Hylton stated that Local Authorities who had adopted the 1877 model byelaws would overcome the majority of problems if they had adopted the 1901 rural model, but many authorities were not keen to do so as it was alleged that it would be unfair to previous developers and owners of property to permit the construction of cheaper houses. Hylton concluded

that the aim of the Bill was to permit more houses to be constructed which itself was advantageous [39]. Earl Carrington, in reply, said that the Government was in sympathy with the Bill but as it applied to England and Wales it included the cities of Manchester, Leicester and other large towns which was not the purpose of the Bill and should therefore be restricted to rural districts or urban districts with the approval of the Local Government Board. Whilst the Bill would encourage the building of houses nothing should be done which would diminish the safeguards against insanitary conditions and the erection of bad houses. The Bill completed its third reading without further amendments and was passed to the House of Commons [40], where it was introduced on the 5th November 1906, but did not proceed to a second reading. The Government's support was one of sympathy and Carrington's statement to the Lords seemed only half-hearted support, exercising caution in relaxing any standards. Eventually the Bill was dropped, when opposition came from the powerful Urban and Rural District Councils Association.

This action obviously upset the Byelaw Reform Association but they at once proceeded to re-negotiate the contents of the Bill with the Urban and Rural District Councils Association, and a new draft was agreed but the reluctance of the Reform Association fully to support the modified Bill, led to its not being proceeded with [41].

In response to the argument for less byelaw control or if possible complete exemption, the Local Government Board saw an opportunity to increase their control of the system by supporting views put forward by the Rural Housing and Sanitary Association. This resulted in a section being included in the Housing and Town Planning Act of 1909, which provided the Local Government Board with the power to revoke byelaws which impeded the building of cottages, not houses. Also where the

Authorities did not make new byelaws the Board could make them and insist on their enforcement by the Local Authorities. The Reform Association was doubtful of the value of this provision in that it was unlikely to be used. Being aware that its influence was fading, the Association was dissolved in 1912 when the British Constitutional Association assumed charge of the Bill, the arrangements being made by the Chairman of the Reform Association who was a member of the Constitutional Association. The action taken by the Reform Association reflected the views of many developers and represented a serious political threat, backed with some technical support, to the Government's policy of securing a reasonable degree of health and safety measures in new houses. The need for relevant byelaws, flexibly and skilfully applied, had been emphasised and had not gone unnoticed by the Government.

Public Health (Amendment) Act 1907

The activities of the By-Law Reform Association motivated the Government to prepare and pass the Public Health Amendment Act of 1907[42]. The Government recognised that much of the agitation was caused by Local Authorities not updating their byelaws to the current Model, and particularly in rural areas by not disposing of the urban Model in favour of the rural or intermediate Models, despite the advice contained in the 1906 circular. The Local Government Board had amended the Model byelaws since they were re-structured in 1877, issuing further Models of the urban series in 1899 (see Appendix 13), and the first rural Model in 1901 (see Appendix 14). The Board recast the urban and rural Models in 1903 and issued an intermediate Model in 1905 (see Appendix 15), the latter for use by rural areas within which were villages of urban character where more structural fire resistance was necessary. To overcome the

objections to enforcement of outdated byelaws it was essential to remove the validity of previously approved plans and require a further depositof plans to which the new updated byelaws, hopefully adopted by all Councils, would be applied. It was not unusual for some Authorities to maintain old byelaws to use as a lever to obtain other concessions which they could not legally demand[43], whilst other Authorities would not adopt new byelaws as it was considered that this would give an unfair economic advantage to a builder constructing to the new byelaws compared to buildings being constructed to meet the old byelaws. The advantage tothe builder was that under the urban code a density of 40-50 houses per acre could be developed, while under the intermediate Model it was 50-60 per acre and 60-70 per acre under the rural Model [44]. Thus the more rural Models adopted the more profitable development was likely to be.

The Act set out to ensure that the latest set of model byelaws adopted by any Authority would be the ones enforced. Provisions were made for plans deposited for more than three years and not acted on to be of no effect, and this was to be stated on all approved plans. Deposited plans and details could now be retained by Local Authorities.

The heights of chimneys relative to buildings [45] and chimney stacks for steam engines, breweries and industrial buildings could now be controlled. Yards adjacent to buildings could be required to be paved. Temporary buildings, which had not previously been the subject of control, provided a new section to the Act [46]. Plans had to be deposited and conditions could be attached to the approval of these plans relating to sanitary arrangements, ingress, egress and fire protection. Plans had to be considered within one month of deposit and where this did not happen Local Authorities could not use their powers to remove buildings which did not comply with conditions. Provisions were also made

for Authorities to repair or enclose dangerous places which abutted public places [47]. Whilst these powers did not add to the byelaws of Local Authorities they did extend the control that rural districts had on the safety of buildings both new and old.

The Act not only added to existing byelaw making powers, it also included provisions contained in local Improvement Acts. The Local Government Board had previously used this procedure in 1890, not only to strengthen their control of the system but to make these provisions available to other towns that had not sought such powers by means of an Improvement Act. It also encouraged Councils to repeal their Improvement Acts in favour of public Acts producing more uniformity over the control system. The action of Government control in the late Victorian era has been described as being expanding, bureaucratic, centralised and incrementalist and this Act, like the 1890 Act, was an example of that trend [48].

The consolidatory trends of the 1907 Act did not prevent the continuance of objections against the content and enforcement of building byelaws. These emerged during the debate on the Housing and Town Planning Bill 1909 when Mr. Walter Guinness, in support of the principles of the Byelaw Reform Association, moved that the statutory obligation enabling the Local Government Board to revoke byelaws should be dispensed with. He gave instances of byelaws requiring higher costs such as a 9" thick separating wall between dwellings where he considered a $4\frac{1}{2}$" wall was adequate, while the rear open space in Croydon was required to be 500 sq.ft. and only 150 sq.ft. in Edmonton. These were differences between building byelaws and the London Building Acts. Guinness added that among the 140 Local Authorities in the Greater London area byelaws varied enormously adding to the cost of construction and confusion to both

architect and builders [50]. He proposed that the clause should be amended to permit Local Authorities to dispense with byelaws where the Local Government Board thought necessary.

Guinness's proposals were not supported by Mr. Burns, President of the Local Government Board who said that the principle of the objection was that of relief for the London County Council which had built outside of its area and had come into conflict with building byelaws. The London County Council was asking, through Guinness, that the Local Government Board dispense with all byelaws in the areas that the London County Council was encroaching upon. Burns, who was a member of the Fire Brigade Committee of London, for 18 years, considered it "reproducing evil in a worse form" to ask for $4\frac{1}{2}$" thick walls and not to penetrate the roof space and roof surface. He went on to add that by building on land which was cheaper than in Central London, the London County Council had no right to require people to live in cheaper property, furthermore a $4\frac{1}{2}$" wall did not provide adequate sound insulation and there was a need for people to relax in peace. Burns considered that the present system of byelaws was satisfactory and concluded that if London was an example of good building they should not adopt such low standards [51]. This outburst against the imposition of standards by byelaws illustrated that even Local Authorities could adopt the attitudes of development speculators in their need to construct low cost housing. It is therefore not surprising to see why many did not adopt or update their byelaws.

The ramifications of the Reform Association's efforts lingered on and gained strength through the advocates of unrestricted building who sought abolition of building control. This manifested itself in a number of Bills being presented to the House between 1911 and 1914 under the guise of Housing of the Working Classes Bill. These Bills had a

philanthropic intention to improve the housing of the working classes, but they also had as an underlying purpose the abolition of a substantial part of model building byelaws. The first Bill was introduced on the 7th December 1911 and its supporters were hoping to follow the success of the Education (Administrative Provisions) Act 1911 [52]. This Act exempted the Board of Education from the application of a byelaw control by Local Authorities. The Secretary to the Board of Education, Mr. C.P. Trevelyn, referred to a departmental committee report which stated that the construction of educational buildings would be reduced by not constructing to byelaw standards, particularly in areas where antiquated byelaws were in existence. Despite objections, Trevelyn was adament that there would be no Local Authority interference. He stated that cost was all important and there was a need to override local building byelaws[53]. It was agreed that Local Authorities would always be consulted prior to plans being approved by the Board of Education and that they could insist on matters of sanitation.

This Act reflects the growing dominance that Central Authority was exerting over the building control system. The Government, finding itself an injured party by the inadequacy of out-dated byelaws and indifferent Local Authority control, cast itself free of these problems by placing the control within the Board of Education, where it has remained ever since. The sponsors of the Housing of the Working Classes Bill saw the problem of byelaws as one of cost; cheaper houses would mean more being built and more people in the working classes being housed. Guinness again commented on the unreasonableness of byelaws and argued that the Garden City movement had shown how absurd they were. He considered byelaws were ineffective against jerry builders and impeded, harrassed and hampered the public spirited reformer. These arguments, although attractive, were

unsubstantiated and did not win the day. When the vote was taken the Bill was dismissed.

The sponsors proceeded to re-introduce the Bill on 6th August 1912[54]. The aim of the new Bill was to encourage the private ownership of dwellings and businesses amongst the working classes. The provision as to the relaxation of byelaws was included in respect of ordinary housing schemes. The Bill went to a Standing Committee where Burns objected to many clauses, although he was prepared to agree an alteration which referred to Local Authority schemes only. This was an extension of the relaxation or dispensation principles established by the Education (Administrative Provisions) Act of 1911 and was a concession the sponsors of the Bill eagerly accepted, but in their eagerness they proposed amendments to give exemption to housing schemes approved by Government Departments and to private schemes if certified by a Local Authority. Burns objected to these further proposals and the Bill proceeded no further [55].

In the meantime the Local Government Board was trying desperately to get Local Authorities to update and change their byelaws as without these changes central authority would continue to be challenged. A further circular from the Local Government Board [56] reminded Authorities of the need to update their byelaws so as to accommodate changes in construction methods and materials, permitting the use of composite construction such as steel, reinforced concrete, timber framing, slate and tile hanging on panelled walls with an infill of incombustible material. The Circular also reminded Rural Authorities of the rural model which avoided the restrictive nature of urban byelaws on small houses. The Local Government Board also offered their assistance to those Authorities who wished to revise their byelaws.

Model byelaws, despite this plea, were not amended to control or guide on the structural use of steel or reinforced concrete as a frame,part frame or component use. They were amended so as to prevent Local Authorities from insisting that all walls should be of load bearing brickwork in accordance with byelaw requirements on thickness relative to height ratios. This would permit the use of composite construction but in doing so it applied no control over the load bearing elements if not of brickwork. This indicated a lack of scientific guidance of an independent nature and quality that the Local Government Board could readily accept as being unbiased and suitable to include within a byelaw. Local Authorities did not have these resources and were not in a position to prompt the Board into suggesting the content of a format of new byelaws to control those new aspects of building technology. Consequently, the circular was only limited in its aim, nevertheless any improvement in reducing the restrictiveness of byelaws without affecting health or safety was a step in the right direction. The extent of urban byelaws can be seen by reference to Appendix 16. Response to the circular would take time and time was not on the side of these who sought to abolish byelaw control. The anti-byelaw attitudes remained when the Bill was again submitted on March 13th 1913 (57).

This time the Bill sought better application and enforcement of Housing of the Working Classes and to amend the Small Dwellings Acquisition Act of 1899. Central to the Bill was the reduction of construction costs in working class housing and this could be achieved by overriding the requirements of any building byelaw. Burns was prepared to support the useful parts of the Bill for administrative reasons but could not support the entire Bill because of its financial aspects and it was mainly for this reason the Bill was defeated.

In pursuance of this objective the sponsors re-introduced the Bill yet again on the 13th February 1914 [58], when at the second meeting the new President of the Local Government Board, Mr. Herbert Samuel, said that the relaxation of the byelaws required the Board to go into the merits of every case throughout the country and it was a task the Board could not undertake. He went on to say "further I agree with the Honorable Member who introduced the Bill that it is desirable to remove or restructure the byelaws which hamper public utilities, societies, and others in building houses in various locations. In spite of the Local Government Board and the exortations to the Local Authorities, many Authorities are far too rigid and in many cases enforce obsolete byelaws. We must be careful not to allow, in the name of town planning, jerry building to re-appear. The whole question is one of great complexity and my Right Honorable Friend, the Parliamentary Secretary of the Local Government Board has accepted the duty to act as Chairman of a Departmental Committee which I am setting up to go into the whole question of local byelaws and after consideration all interests concerned to make proposals for legislative and administrative action"[59].

The Local Government Board did not want to lose any of its controls over Local Authorities, or influence over the growing importance of sanitary improvement, their growing bureaucratic approach needed more not less control. A strong Central Authority was the only way to force many Local Authorities into some form of positive action on these issues. The Board had sufficient influence to ensure the Government retained its position in this respect. However there was extensive bad building and insanitary problems existed in both town and rural areas; it would have been unwise and socially unacceptable for the Government to abdicate its responsibilities completely. It is well known for Government, when faced

with a problem to set up a Committee, and that they did.

The objections raised by the anti-byelaw lobby were now to be considered by the Departmental Committee. A further chance to get their views accepted, but on this occasion the evidence would be subjected to close examination and compared with evidence put forward by those who supported the principle of building byelaws. The growth of byelaws since 1875 both in content and application was necessary to curtail development of houses that could seriously affect public health and safety. The result was generally quite successful as the majority of houses erected at the end of the nineteenth century exceeded the minimum byelaw standard(60). The various standards applied by the Urban, Rural and a mixture of the two known as the Intermediate Model Byelaws, together with Improvement Act and Public Health Act requirements was confusing, onerous, conflicting and indifferent, consequently it was not surprising in recognising the extent of objection. The Local Government Board having developed its bureaucratic control over the system did not intend to lose its grip. The Board recognised the need to continue byelaw control but needed to take the heat out of the arguments being made and place the matter once again firmly under their control and this could be achieved through the workings of the Departmental Committee. Although prompted by the Local Government Board, the Government was correct in deferring to a Departmental Committee where structured and informative argument could take place. The steady hand of Government was needed otherwise there would have been a breakdown of control resulting in Building Control reverting to a Local Improvement Act system which although good in some areas would not have been extensive enough to have been in the national interest. The Local Government Board provided a lead to which many Local Authorities responded, unfortunately many did not causing the inbalance

in the system. It was this area of Local Government response that was problematical, the discretionary role was critical.

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CHAPTER 6

COMMITTEES, COMMISSIONS AND CIRCULARS

The parliamentary battles for the reduction, or where possible, the abolition of building byelaws was over by 1914. Those who supported the Housing of the Working Classes Bills had lost. The Government had conveniently, but rightly, referred the matter to a Committee where there was less political meandering and more critical argument. Above all the growing Civil Service had influence and therefore some control over the proceedings. Building control was never a strong subject to stir emotions, or public concern or even command parliamentary time, but by debating the issues in Committees or Commissions there was a likelihood of improvement in the system. This growing trend will be examined to determine the influence of this Committee on the type and change of byelaws, legislative changes and the extent of central control over the system.

Supporters of the Housing of the Working Classes Bill were appointed to the Departmental Committee on Building Byelaws, by Herbert Samuel, President of the L.G.B. Sir Randolph Baker sat during the 1914 sittings but due to war service was replaced by Colonel Sir A. Griffiths Boscowan. The Committee, formed on the 30th April 1914, was chaired by the Rt. Hon. J. Herbert-Lawes M.P., Parliamentary Secretary to the L.G.B. The Committee Secretary was Mr. K.M.C. Shelley of the L.G.B [1]. The outbreak of War in August 1914 seriously delayed the work of the Committee; other duties being placed on members it became impracticable to continue. Up to the end of the parliamentary session of 1914, the Committee held 9 meetings and interviewed 14 witnesses.

Their brief was limited to "consideration of the control at present exercised in England and Wales over the erection of buildings and the construction of streets by means of byelaws and local regulation and their effect on building and development and to make recommendations"[2]. It did not include London and therefore a comparison between byelaws and the London Building Acts could not be made. This in effect prevented any recommendations to merge the London system with that of England and Wales. In the prevailing mood any such suggestion would have been strongly resisted. Neither could the Committee investigate the effects of building control on public health and safety, to the extent of determining whether or not the byelaws were achieving their aim of improving health and safety. This surely should have been the main aim because that is the intent of byelaws, yet it was avoided as the problem that led to the enquiry was their effect on building and development. This raised questions such as whether the byelaws were inadequate in rejecting old building methods and traditional materials, or restrictive to new methods and materials and whether this increased the cost of building whilst reducing profits. The latter question concerned particularly those specialising in the development of working class houses and the growing trend of development based on new town planning principles that had emerged from philanthropic and garden city developments. This was the nub of the inquiry.

Prior to the end of the War, on the 29th October 1917, Mr W.H. Fisher the then President of the L.G.B., reconstituted the Committee. A further 24 meetings were held, interviewing 35 witnesses. By the time the Committee finished its work on 20th March 1918, the report was completed and presented to the President of the L.G.B. on 13th November 1918. It comprised some 49 pages, appendices and a supporting document of minutes

of evidence given during the interview of the witnesses.

Despite the considerable parliamentary support for the removal of building byelaws, evidence given to the Committee did not substantiate that view. Chance, who had done much to inspire and lead the anti-byelaws campaign, agreed that there was a continuing need for building byelaws but they should be so constructed and administered as to avoid causing unnecessary injustice and hardship. These views were in general supported by representatives of the Royal Institute of British Architects (R.I.B.A.) and of the National Federation of Building Trades Employers' (N.F.B.T.E.) Both bodies agreed that the control of building by a public authority was necessary in the interests of public health and safety and that the byelaw system with L.G.B. approval was the best; it was the subject matter and specific nature of the byelaws which was at fault. The representatives of the Rural District Councils Association (R.D.C.A.) and of the Urban District Councils Association (U.D.C.A.) agreed that byelaws were necessary, so much so that they took great exception to Authorities who had not adopted byelaws or taken adequate measures to ensure proper administration and enforcement.

The evidence given by the representatives of N.F.B.T.E. was however, divided. Two were in agreement on the principle of byelaws but Williams maintained total opposition and stated that fewer byelaws meant less interference especially by the officials who appeared to have uncontrolled power of administration. Good builders in their own interests would build to a good standard, he added, and byelaws were unnecessary [3]. The majority of complaints brought to the attention of the Committee had little relevance to byelaw control. The report states "it has been brought to our attention that the majority of complaints made in the press against byelaws are in general terms and that it is

seldom that the complaints descend to detail and give instances showing exactly what the difficulties are. The same tendency has been apparent in much of the evidence before us. There has been a great deal of generalisation to the effect that byelaws are, or may be, unduly restrictive but such facts as have been adduced in support of the allegation have not always been borne out by the complainant" (4). Nevertheless the Committee recognised there was a grievance, though some 70% of the complaints made had nothing to do with byelaws but referred to the control by regulation in local Acts, statutes and discretionary control. It was clear that the differences had to be resolved and this could be achieved either by accepting that there would be no control or alternatively by introducing one common set of rules.

Supporting the principle of control by the local Acts, Pick, a witness on behalf of the R.I.B.A. had experience with the regulations made under local Acts in Leicester and he contended that such control was better and should not be done away with by an unusual system of byelaws, quoting examples of buildings being more expensive to construct outside of Leicester due to byelaws requiring greater thickness of wall construction (5).

Platt, a building surveyor, who was not representing any organisation had submitted evidence based on his many years of experience as a building surveyor to Salford Corporation. He explained that Salford had not been hampered by building byelaws as the town had four local Acts controlling building. The first Act, dated from 1862 was followed by Acts of 1870, 1871 and 1875 which remained in operation until 1899, admittedly these Acts related only to housing and there was no control over public or warehouse-type buildings, many of which subsequently became the subject of dangerous building notices because of dilapidation or their

inability to sustain the loads to which they were subjected. As a result regulations were introduced in 1901 extending control over this type of building but even then wall thickness was limited to 9" with party walls of only 4½". Similarly, regulations relating to drainage controlled only the size and direction of flow and not the joints. Consequently it became possible and even permissible to construct drainage with leaky joints. This highlighted the weakness of specific requirements in that if they were not specific enough the aim was frequently missed. The irregularities were partly removed when Salford adopted byelaws in 1899. The operation of these byelaws provided some elasticity of administration[6] and ease of up-dating which in Platt's opinion was not only better than control by local Acts but was welcomed by builders. Platt's experience had shown him that byelaws were not an imposition and in the main prevented jerry building and in this alone they were successful [7]. The Builder however considered that "jerry builders were not such a problem and actually contributed to economic building. It was stated that the jerry builder has never been accused of jeopardising the safety of his structures, on the contrary, he has reduced the science to a fine art besides appreciating the values of standardisation" [8]. Whilst there may be some truth in this opinion, jerry builders have very little understanding and feeling for the principles of the science of building. In any case, each building should not be an extension of research into the limits of structural stability or sanitation.

The Committee considered that control by local Acts was too rigid as it could be changed only by Parliament. Builders had little knowledge of the regulations that could be applied and the discretionary powers enabled updating in an indifferent way causing inconvenience and indignation. Byelaws, on the other hand, had to be made public and were

readily available to the builder, making his task much easier. Whilst there were benefits in both systems, the Committee came to the conclusion that byelaws should be the standard method of control and all matters controlled by other methods should be transferred to the byelaw system[9]. This recommendation was a means of simplifying control, making the system and its requirements uniform, but in doing so it was placing the overall control firmly in the hands of Central Government. Despite Local Authorities being deprived of this independent control there was no other place for national control other than through the L.G.B. the problems expressed were national problems and could only be dealt with nationally.

The system of control had now been established; the problem was not one of form but one of content. Dolton, the principal officer in the legal department of the L.G.B. gave the Committee a very thorough explanation of the byelaw system and its development since 1858. When questioned on the outcry against byelaws he explained that although there had been some complaints it could not be described as an outcry but stated that the majority of these complaints were against old byelaws which tended to be more restrictive than the latest model byelaws and where these were adopted the complaints lessened. The cost of construction could be raised by overdemanding byelaws. Byelaws had restricted the use of $4\frac{1}{2}$" thick walls which were not only inadequate in strength but also in weather resistance and lacked thermal and sound insulation. The 11" cavity wall was becoming popular even in low-cost housing and permited by many authorities but in Cardiff the byelaws required a 9" outer skin and $4\frac{1}{2}$" inner skin thus increasing the cost of cavity wall construction by approximately one third without any good reason. Similarly, many authorities still required the party wall between

houses to be taken up above the roof despite a model byelaw permitting a non-combustible roof covering to be taken over the top of the wall and bedded in cement mortar. Worsley, an architect at the L.G.B. sought not to increase the responsibility of the L.G.B. and advocated that it was better not to have a byelaw than one that caused problems.

These views may at first sight seem pathetic but what he was making clear was that byelaws based on specific requirements were becoming quickly outdated by the introduction of new materials and building technology and it would be a never-ending job for the L.G.B. to keep updating. What was needed was a form of byelaw that stated a functional or performance standard and allowed the Local Authority and the builder to interpret the details of meeting that requirement. This form of byelaw was suggested by Professor Pite, a fellow member of the R.I.B.A. who in his evidence on behalf of the R.I.B.A. considered that a simple code was desirable, a code which stated the principles to be achieved rather than specifying the details of how to achieve them. He thought the code should be universal thus eliminating the varying byelaws that existed and illustrated the idea by pointing out that the laws of gravity worked the same in Dover as in Birmingham so there was no reason why byelaws on structural stability should vary [10]. H.W. Fovarque, representing the A.M.C. remarked that the same principle applied to fundamental health conditions [11].

Whilst both Pite and Platt recognised that differing traditional building materials and methods existed throughout the country the functional byelaw would accommodate these variations although Platt's approach tended to be more specific than Pite's [12]. However, if the Committee agreed to Pite's suggestions there was a strong possibility of increasingly wide variations of interpretation by Local Authorities which

could give rise to the difficulties already complained of.

The Committee did not feel that the evidence in favour of one uniform code throughout the country was conclusive but a reasonable solution could be achieved by ensuring that the L.G.B. did not permit Local Authorities to adopt byelaws which varied significantly from the model byelaws. The L.G.B. had made efforts to achieve a wider adoption of current models but having done so it was necessary to keep up to date. The Committee considered the methods of updating, first by alteration of Section 44 of the Housing and Town Planning Act of 1909 providing the Board with stronger powers, secondly by permitting a builder to build in accordance with the current model in Districts that had not adopted that model and thirdly, by discarding all byelaws at a certain date making it necessary to adopt new and up to date byelaws. The first method was discarded as the Act related only to houses and it was necessary to extend the powers to all buildings whilst the second method would deter Local Authorities from keeping their byelaws up to date and the third method was agreed whereby all byelaws would lapse after a period of ten years. Using this procedure many, though not all, byelaws would inevitably change in content but more importantly develop into a "national code" (13).

As we have seen with the emergence and growing use of steel, concrete and reinforced concrete, buildings were becoming larger and more open, taller, supporting greater loads, containing more combustible material and requiring greater fire resistance. This was the result of growing industrial and commercial development that had an impact on health and safety issues as well as satisfying the need for good housing. The Committee failed to appreciate the rate of change that was occurring with building technology. To limit the review, change and adaptation of

new byelaws to a ten year cycle would be inadequate. The same problems would keep re-emerging. A more frequent review was needed together with powers for Central Government to require Local Authorities to adopt new byelaws and repeal the old.

The enforcement of outdated byelaws by surveyors who carried out their duties diligently only added to this problem. Many objections were made concerning the skills of surveyors and generally reflecting the low standard encountered, the indiscriminate use of their powers. To avoid most of these problems a capable professional should be employed as a surveyor [14]. The latter view would have been very appropriate if byelaws were functional allowing the surveyor the discretion to interpret the adequacy of the construction but byelaws were specific, often defining a dimension as a measure of adequacy and it did not require a high level of skill to do that. Gaskell refers to the problems of supervision and inspection frustrating the operation of the byelaws [15] which was certainly reflected in the objections expressed to the Committee but the effectiveness of byelaws can be frustrated by the lack of supervision as much as by diligent inflexible inspection and enforcement. The need for good inspection and enforcement was made clear by the Committee in that a duty to the householder existed and the Authority had this responsibility, often ignored. As many as one hundred and seventy rural districts had not adopted any building byelaws (about 1 in 4 of the total), an unsatisfactory situation which encouraged builders to develop in these areas away from the imposition of control [16].

The Committee avoided the objections relating to the skills of the surveyors as this was not seen as a matter of their concern more as an internal matter for Local Authorities. Consequently their attention

turned on the way the responsibilities were administered by pointing out that the reasons why the plan was rejected must be stated quoting the byelaw or section of the Act which was contravened, also adding that objections should not be raised on resubmitted plans that could have been raised on the original plan. The existing rights by either party to resolve their differences in the courts were thought to be adequate but in addition the offices of the L.G.B. would be available to determine the issues [17]. These proposals would ease the frustrations experienced by builders and the availability of the L.G.B. to determine issues could prove a more convenient, quicker and more understanding way to solve byelaw problems.

It was not uncommon to find that in many areas builders acted as they pleased and many Local Authorities "winked" at contraventions of the letter of the law provided the spirit was met. These actions covered the broad spectrum of discretion from total avoidance to an application of intent as opposed to exact obedience. The latter was more in keeping with Pite's philosophy. The Committee steered away from the idea of a system which allowed the surveyor discretion. Evidence suggested that such discretion would be fraught with problems of rivalry, jealousy and favouritism and that some surveyors could not be trusted. The duty of enforcement was a matter that many Local Authorities had conveniently overlooked and the Committee recommended increasing powers of Central Government to enable the L.G.B. to appoint County Councils to enforce the byelaws when District Councils had defaulted from their duties, a similar procedure to their powers in respect of defaulting Boroughs in London [18]. Local Authorities might be considered reasonable for not enforcing certain matters of a minor nature but more serious matters should be enforced. The opinion of the Committee was that a duty to enforce

the law existed. There was no moral or legal right to take the irregular course of non-enforcement, particularly if the Authority derived benefit from non-enforcement [19]. However, the law, as it stood did not compel a Local Authority to enforce its byelaws if it chose not to. Whilst the L.G.B. had certain powers to require enforcement of the Public Health Acts there was no power compelling the Board to do so. The Authorities had a free hand. This did not appear satisfactory to the Committee who recommended that the County Council or any ratepayer or inhabitant of the district could take action for a breach of byelaws if the Local Authority had been requested to take action and refused to do so. The costs would be borne by the defaulting Authority if the action was successful [20]. This was an unacceptable situation for Local Building Byelaw Authorities.

Although Central Government was the main beneficiary in the policy of exemption [21] the Committee did not wish to see this policy expanded and it was suggested that wherever possible the exemptions already granted should be withdrawn. This was the correct approach. It had been seen that all buildings, both public and private were being built to the same standards. The exemption provisions of the Housing and Town Planning Act of 1909 had been incorrectly used whereby Local Authorities had permitted the contravention of byelaws in favour of a better, or presumed better, standard under a town planning scheme or retained oppressive byelaws to trade with developers for assumed town planning benefits. This practice was bad in that discretion could be exercised not based on law, open to abuse, uncertainty and frequently not favouring public health or safety. The Committee was right to discredit this practice.

It is clear that the recommendations of the Committee were not revolutionary. Rather it retained the status quo of control, based on

parliamentary legislation with a central body available for advice to both Central and Local Government, but with increasing directive control over Borough, Urban and Rural Authorities who would retain the power to adopt and enforce building byelaws. The recommendations did not resolve the problems of building control which were handed back to parliament from where they came.

The editor of "The Builder" expressed his disappointment with the report stating, "whilst acknowledging the contentious work undertaken we must express ourselves disappointed with the conclusions. We are faced with a new situation and by no means a temporary one in which every incentive should be given to building and builders should be relieved of as many burdens, especially litigious burdens, as possible and we fear that the very cautious recommendations, if adopted will take years to carry out" (22). The rate of change was slow, it had taken sixteen years to report on many of the issues brought into the open by the forceful approach of the Reform Association and it would not be surprising to find that it would be another sixteen years to bring these reforms into being.

Having been faced with the possibility of the demise of building control the L.G.B. had not only re-established the basis of building control but had, through willing witnesses, strengthened the system. The work of the Committee was needed not only to clear the air in response to the allegations made against the system but it established strengths and weaknesses. It was clear that bad building had to be prevented.

The workings of the Committee had established beyond any doubt that legislative control was necessary, particularly where speculative working-class housing was concerned. The construction of structurally weak, insanitary properties with poor fire resistance was to be avoided; a philanthropic approach was not the solution to the problem.

Furthermore, Local Authorities had taken over the role of the philanthropist and had now become the providers of working-class housing and were expected to set a high standard. Central Authority maintained an air of mistrust over the ability of Local Authorities, many of whom could not be relied upon, because of the influence of vested interests. Consequently, they took the opportunity of securing tighter control over their central role in byelaw making, directions and professional advice to Local Authorities. The proposal that all local Acts should be abolished in favour of a central byelaw system would strengthen the grip of Central Authority. Independent action by Local Authorities was limited to their discretionary powers of adoption and enforcement. A centralised system had the benefit of providing a uniform approach to requirements, on which economies of standardisation could be built, while many technological advances could be incorporated into model byelaws and so become more widely acceptable. This approach would have provided some degree of flexibility and allowed innovations and commercial application, but the opportunity should have been taken to remove discretionary powers and to make the adoption and enforcement of building byelaws compulsory. This would have aided the introduction of up-to-date byelaws and the repeal of private Improvement Acts, or those parts with a building control element. It would have been a spur to Local Authorities to accept their responsibilities which may have resulted in a more professional attitude towards the administration of building control.

Building byelaw reform was not seen to be such a priority in 1918 as it was in 1914. The priorities in 1918 were very different; four years of war had changed the Nation's financial position. Industries, especially munitions, had expanded to meet the war effort. This had meant

full employment, but rationing and lower wages had kept the demand for normal consumables low. On the other hand, demand for housing was high. Private house building had stopped by the end of the 1914 and by 1919, 610,000 houses were needed. Despite the tremendous loss of young men due to active service, the demand for both public and private housing remained high. The Committee had recognised this demand but had quite rightly not advocated a lowering of standards or controls merely to meet demand, or an attractive purchase price to the buyer and high profit element for the speculator. Such a recommendation would have been likely to result in the continuation of slum development. The solutions offered by the Committee would iron out most of the problems raised, but Parliamentary time for further legislation on the lines recommended by the Committee was limited if not completely unavailable due to many other more pressing matters.

The Housing (Building Construction) Committee

The housing problem was extensively discussed by the Housing (Building Construction) Committee which had been set up by the President of the L.G.B., Mr. W. Hayes-Fisher on 26th July 1917. The brief of this Committee was to "consider questions of building construction in connection with the provision of dwellings for the working classes in England and Wales and to report on the methods of securing economy and despatch in the provision of such dwellings"[23]. Sir John Tudor-Walters[24] was the Chairman, Mr.E. Leonard of the L.G.B. was its Secretary and there were nine other members including one further M.P., two civil engineers and one architect.

House construction during the war had been very limited and had

failed to make much in-road into the need for working class houses. Furthermore, returning soldiers had been promised homes fit for heroes.Houses constructed to byelaw standards were fit for habitation but the problem was not only one of quality, it was also one of quantity. Local Authorities had taken on the role as a provider of housing and this role was slowly beginning to emerge and develop. Before the war, they had provided 1% of all new housing but a considerable contribution was needed to meet the national housing needs. Any control that restricted the output of housing or unnecessarily increased the costs would not be accepted and it was not surprising to find that building byelaws were considered to be restrictive. The Housing (Building Construction) Committee were aware of the working of the Departmental Committee but felt it necessary to report that many witnesses had offered an urgent and satisfactory solution to the building byelaw problems (25).

This evidence had not been sought by the Housing Committee but so strong were the views of the witnesses, it was felt that it should be reported. Witnesses were often not clear as to whether their objections related to byelaws, regulations made under Improvement Acts, or other requirements made under Public Health or Local Acts; they were all condemned together as being restrictive and uneconomic. It was contended that statutory control had restricted progress in new forms of construction and that was one reason why construction in England lagged behind in the use of concrete and reinforced concrete. Old fashioned methods and traditional materials had been adhered to by many a builder who could not be bothered to seek approval for new methods and materials not recognised in the local byelaws. Witnesses claimed that byelaws actually helped to maintain old fashioned, undesirable forms of development, although this could not be said about many towns and cities

where byelaws were enforced to prevent the erection of ghastly rows of terrace upon terrace of unhealthy and socially degrading back-to-back houses. Neither was it true in many rural areas where pressure had already been exerted to amend building byelaws to permit older and more traditional forms of construction, other than brick and stone, such as timber frame construction and thatched roofs. However, the maintenance of old byelaws did restrict the use of cavity walls, a form of construction that offered better thermal insulation and weather resistance for basically the same constructional costs. Also the use of Portland cement concrete as a complete foundation on brick footings to the base of the wall was still insisted upon. Despite some variations many Authorities had byelaws which required the party wall to project beyond the roof covering producing problems of weather resistance of the parapet and roof. Differing requirements for structural timbers, staircases, open space and ventilation were other matters that had a restrictive influence. Most of these problems could be resolved as we have already seen by the use of up-to-date byelaws. The rigidity of the byelaw system was recognised by the Committee and their report called for a more flexible approach to amending byelaws which would allow greater freedom in the use of new materials and methods.

Reference was made to relaxing powers provided in Scotland by Section 39 of the Burgh Police Act (Scotland) 1902 but it was felt that byelaws should be so framed as to be quickly amended. Such an approach had been undertaken by the L.G.B. but as we have seen Local Authorities were slow to respond. It would seem that the Committee was calling for a functional or performance standard as Pite had advocated to the Departmental Committee but this did not have the support of the L.G.B. partly because it would limit their role as professional advisors to the

Government and Local Government. It could also result in many Local Authorities having to improve the quality of many of their surveyors in order that acceptable levels of professional judgement could be given to the interpretation of byelaw requirements.

As building materials were likely to be in short supply after the war, economic use was essential. However, the byelaws were to ensure that buildings, particularly dwellings, were erected to provide safe and healthy occupation and any amendment to them should not result in standards not meeting that aim. Timber was a good material to select in this connection, as unscrupulous builders would often use undersize timber, which when slightly overloaded would slowly deflect. However by the time the defect was noticed the builders would be outside of their contractual obligations and would not be obliged to correct their faulty work.

The report suggested that disputes over interpretation or application of byelaws should be resolved by application to local housing commissioners which the Committee recommended to be appointed. Unlike the Departmental Committee report, this report considered that it was desirable that byelaws should be relaxed in areas which were developed in accordance with town planning schemes prepared under the Housing and Town Planning Act 1909, but due to the various stages that the schemes had to pass under the provisions of that Act, this would produce an unacceptable delay. The Committee had given this matter much consideration as they had concluded that buildings for the working classes could not be economically or expeditiously provided under the existing system of rigid byelaws and statutes. The report recommended that during the emergency period after the war, and until suitable alternative legislation had been enacted, the Local Government Board should be given the power to exempt

from byelaws, statutes and regulations any housing scheme for which plans and specifications had been approved by them. The solution of the byelaw problem put forward by speculators and philanthropic developers alike was seen as one of exemption. This approach suggested that until the building byelaw system had been radically altered and its requirements easily applied, exemption from byelaw control should be granted to those who wanted it. The proposal to extend exemption was based on frustration and the desire to avoid unnecessary bureaucratic interference, but as we have seen the Departmental Committee brushed the proposal aside and firmly established that exemption should not be granted to anyone. The suggestion that the L.G.B. should assess Local Authority proposals and grant relaxation was also not supported as the L.G.B. did not have adequate staff resources.

The report went on to consider in great detail the construction of dwellings including siting and design. All aspects of construction were investigated and specifications for good practice drawn up. The Committee took the opportunity to draw attention to suitable alterations to model byelaws. It was recognised that standard design with minimal environmental standards such as room sizes, kitchens, sanitation, outbuildings and drainage, could be constructed quicker and cheaper where components such as doors, windows, bricks floors and roofs were made to standard sizes thus minimising variations on site which were expensive to achieve. The Committee was assisted by the Department of Scientific and Industrial Research (D.S.I.R.) which was established in 1916 and part of their work was the investigation of building materials. The Engineering Standards Committee, formed in 1901 later to become the British Standards Institution in 1919 also assisted. With the help of these bodies and the evidence submitted the Committee was able to draw up a constructional

manual [26].

Had the brief given to the Departmental Committee allowed theinvestigation into the content and application of byelaws it may have been possible for that Committee also to work closely with the D.S.I.R. and Engineering Standards Committee where building byelaws could have been analysed for their requirements against the materials and technology available, thus producing a better set of model byelaws more in the nature of a constructional specification. This would have permitted a better balance between the working of the two committees whereby the respective constructional specifications could have been adopted into one thus avoiding the Housing Construction Committee recommending exemption as a policy of avoiding increased costs associated with obsolete byelaws. As it was the Departmental Committee was mainly a committee to which objectors could vent their frustrations and the real issues such as content, interpretation and application were not effectively dealt with. As for aiding the construction industry in achieving better standards, the Housing Construction Committee, by the issue of the manual, was the more successful Committee.

How could the reports of these two Committees be implemented to provide better and more economical housing and an improved, yet effective building control system? Whilst one Committee recommended relaxation of building byelaws on approved housing schemes, the other recommended the maintenance and improvement of controlling standards on all buildings. The latter was designed to minimise jerry building whilst the former could well produce an opposite effect. In its desire to make up the shortfall in housing needs and to seek full employment the Government did not seek improvements in a system that had been criticised as being restrictive even when such improvements could have been beneficial; it

seemed better to relax restrictions and build. The President of the L.G.B. made this clear. When asked if he intended to act on the recommendations of the Departmental Committee, he replied that he could not promise any legislation on the lines of the Committee's report and when similarly questioned on the Housing Committee report he stated that the report was being fully considered with a view to introducing a Housing Bill [27]. What was needed was for the L.G.B. which was responsible for both housing and building byelaws, to unify the standards set out in the Housing Committee's report with current model byelaws and to produce a new model. It would then be necessary to make Local Authorities adopt a new model at the same time taking the opportunity to repeal all local Building Acts and introduce a system of relaxing byelaw standards to suit certain circumstances. This was an alternative to functional byelaws, and could have been acceptable to the L.G.B. The principle of relaxation of byelaws affecting Local Authority housing schemes, introduced by the 1909 Act, was retained in the Housing Bill of 1919 [28] and extended to cover any housing scheme of a public utility or Housing Trust. In introducing the Bill the President of the L.G.B. said that it was essential to remove any unnecessary impediments in the emergency programme of house building. Even aesthetics have been "thrown out of the window" the construction of houses being considered more important than their design; "when thousands of people, many of whom had fought for their country needed a roof over their head. It was the Government's duty to provide houses, after that it could be discussed whether they were aesthetically pleasing or not"[29].

Controls were seen as a restriction and this attitude persisted with the introduction of the Housing Acts of 1923 [30] and 1925 [31]. The relaxation powers were strengthened further by enabing the Minister

to require a relaxation of byelaws on any building erected within a Borough urban or rural district. Where the Local Authority refused to do so the Minister had the power to revoke old byelaws and apply new ones. These powers placed further pressure to update byelaws or face possible embarrassment in having the Minister to do it. The Conservative Government seemed to favour up-to-date byelaws as being an equitable way of ensuring uniform and necessary standards that did not restrict economic construction. During the debate of the Housing Bill in 1919 it was stated that the consolidation of the building standards imposed by the Acts of 1875, 1890 and 1907 should be done quickly. The action taken by the L.G.B. to update byelaws was also questioned. It was feared that many Local Authorities would not adopt byelaws unless driven to it. The reason why was not completely known, although many were afraid of any increase in construction costs, while in other cases there was a lack of healthy public opinion allowing vested interests to dominate. It was alleged that the only way to keep a Local Authority up to the mark was to have a strong driving pressure from Central Authority (32). Since 1919 this was now the role of the Ministry of Health to prompt and push but the discretionary powers of Local Government was a paramount principle not to be touched by Parliament or its agents. This did little to prevent jerry building since builders and speculators who benefited from such freedoms would complain of any restrictions applied to them even when developing in areas that had no byelaws.

The problem derived from the indifferent use of discretionary powers. The majority of Authorities adopted byelaws, many did not. In South Wales 104 Authorities had not adopted byelaws and the Government had no intention of forcing them to do so (33). Even a request to those with byelaws to update met with little response, 72% did not reply to the

Ministerial circular. Experience showed that Local Authorities were not acting in a responsible manner. The Government appeared to deflect the responsibility, allowing many authorities to become scapegoats for critisisms of the building control system. Many of the large boroughs who retained their Improvement and Building Acts jealously guarded their independence. The anti-centralists were still active even though local Authorities had an ever increasing social role. The application of regulations and byelaws still caused much confusion and dissent and simplification was long overdue although the Ministry of Health kept trying with varying degrees of success. When the Minister was questioned on the subject in 1931 he replied that "outside of London few areas exist which have not procured a modification of their own Acts so as to follow a more flexible method. I am always prepared to assist Local Authorities in adopting the more modern or convenient method"(34). Once again "discretionary power" was upheld even though the discretion was at times detrimental to the building industry in its constant pursuit of economical building.

The recommendations of the Departmental Committee remained to be implemented and were capable of reducing many of the problems. The Government did not use the Public Health Act of 1925 to bring this about but relied on its policies of exemption and the efforts of the Ministry toof Health in encouraging the adoption of the latest byelaws. The Government was firmly set in this action and seemingly leaving the private sector of housing to deal with its problems as best it could.

A firmer control had to be put on Local Authorities if the Government wished to produce a building control system of some uniformity equally administered to all concerned. The lack of interest and general inability to adopt or update the byelaws was again emphasised in evidence

to the Royal Commission on Fire Brigades and Fire Prevention in 1923[35]. Just over three years had elapsed since the Departmental Committee had reported and a further opportunity existed to review the technical content of the byelaw system and the administrative effectiveness. Nevertheless, only the structural fire resistance was considered. Evidence submitted to the Commission showed that of the urban districts in England and Wales, including boroughs, numbering some 1,460 at least 50 had not adopted any byelaw whatsoever [36]. In 60 Authorities byelaws made under the original Act of 1858 were still in force [37] and in many Authorities byelaws of similar antiquity were enforced. Prior to 1901 rural areas often adopted the full model byelaws which were urban in content and despite the L.G.B. circulars of 1906 and 1912 of the 600 rural Authorities 200 had byelaws substantially of the urban type in all or part of their districts, between 40 and 50 had adopted the intermediate type, 250 the rural model leaving some 150 without any at all [38]. (For a description of the Rural Intermediate and Urban Model Byelaws see Appendices 14, 15 and 16). These figures show clearly the pattern of Local Authority response and apathy to their building control responsibilities and reveals the considerable task the L.G.B. had in trying to establish that responsibility and uniformity the system badly needed. The consistent flow of this type of revealing evidence led the Commission to concur with the Departmental Committee that the existing statutes should be consolidated and procedures simplified. Byelaws should be brought up to date especially in the case of smaller urban districts, this would ensure the precautions against fire were adequate and up to date while at the same time their procedure would remove unnecessary obstacles to the construction of dwellings at reasonable cost. It was felt that matters of fire prevention should be dealt with by Statute

rather than byelaw, which seemed to take a leaf out of the London Building Acts, but where this was not possible then the procedure of up-dating laws at least every 10 years as suggested by the Departmental Committee would be considered as an acceptable alternative. The differing content of byelaws was again shown to be a problem, not only economically but also constructionally in the way it was necessary to meet the requirements of the byelaws. An example quoted by the Committee, which I have referred to previously, see pages 162 and 171, was that separating walls were required to extend above the roof surface so as to effect complete fire separation. Many Authorities had retained this byelaw although there were some more enlightened Councils that had withdrawn it. The City of Exeter had such a byelaw until 1912 after which it was discarded in favour of walls up to the underside of the roof covering, simply by adopting the latest model byelaw (see fig. 17).

In Birmingham, where this requirement did not exist, it had been found that in two-storey dwellings, acceptable fire separation was obtained by taking the separating wall up to the underside of the roof covering which was bedded in cement mortar on top of the walls. It was due to Councils like Birmingham taking the lead that model byelaws were structured to meet the latest form of construction. Reducing construction costs reached its limits when the Commission considered that byelaws on the construction of fire resisting hearths, which had been dropped from the latest model issued by the Ministry of Health, should be reintroduced in all future models. Hearths had been a part of buildings for centuries and not to have a byelaw limiting the use of combustible material in or close to hearths was somewhat ludicrous to say the least. While not against the principle of relaxation to remove unnecessary requirements, this should not extend to precautions for prevention of

fire, which should, wherever possible, be strengthened by the inclusion of simple, inexpensive improvements for fire prevention. Inconsistencies were also causing problems with timber buildings. In some areas, there was no control at all while in others, particularly rural areas, byelaws existed that required all walls to be constructed of brick or other fire resisting material. Timber frame buildings were quite common in rural areas, being erected for low income families due to the cheap construction and readily available timber, but exception was taken where restrictions limited or prevented their construction. It was considered that there should be a more comprehensive and uniform approach to this problem and that such buildings should be properly isolated. Where this isolation was not available party walls were to be constructed with an adequate degree of fire resistance.

The resentment about restrictive control on timber buildings mainly affected development in rural areas, but in the Borough of Brighton, a byelaw existed since 1886 which permitted the construction of timber buildings provided they did not exceed a terrace of three. The timbers were to have an infill of brick and a backing of brickwork not less than $4\frac{1}{2}$" thick and the buildings were to be isolated from other buildings by at least fifteen feet [39]. These provisions did not find their way into the Exeter byelaws until 1912, some 26 years later. (For a brief of the 1912 model byelaws see Appendix 16). The extent of this delay is another example of how the discretionary powers of Local Authorities could be applied as to frustrate the actions of builders or Central Government seeking some uniformity in byelaws.

Shops, cinemas, hotels, theatres, churches, schools, hospitals, libraries and other public buildings also needed controls for safe use by the general public. Whilst the control of cinemas was very firm in

Fig. 17

Early bye-law housing at Normanby Road, Exeter showing the separating wall being taken above the roof covering. The 1877 Model series did not require front open space. Hence the house abuts the back of the footpath. The street bye-laws controlled the layout and space between fronts of houses.

London, due to the Metropolitan Management and Building Act of 1878 licences were required for music and dancing in London and Middlesex, such control was virtually non-existent in 1923 in the rest of England and Wales. The Commission recommended that for buildings used for entertainment, a code be drawn up, based on the London County Council model, to give guidance to Local Authorities, and either the Home Office or the Ministry of Health should issue a set of guidance regulations setting out the standard of means of escape from hotels. These should be enforceable in a similar way to the Lowestoft Corporation Act and the Ramsgate Corporation Act, both of which also catered for flats, restaurants and taverns. These proposals were weak, it was hardly worth suggesting that codes or regulations be drawn up merely to guide Local Authorities or theatre owners on satisfactory means of escape in case of fire. In the majority of instances such standards would be ignored. The lack of responsibility shown by many Local Authorities in the adoption and enforcement of byelaws was also evident in laxity regarding means of escape in case of fire. Local Authorities already had such a statutory responsibility for factories and workshops[40] but only 4% acted in a responsible manner by adopting byelaws for this purpose (For byelaw content see Appendix 17). This again showed clearly the lack of concern on important matters of health and safety. The Commission was suggesting that consolidation would enable a fresh start to be made and the simplification of administration and up-to-date byelaws would overcome the difficulties and frustrations. This approach needed legislation and this the Government avoided, choosing instead to continue with prompting and advising Local Authorities of their role and responsibilities.

Ministry of Health Circulars

The Government's lack of commitment to restructuring the building control system on the lines recommended by the Departmental Committee was the main reason why Local Authorities continued with the haphazard approach to their responsibilities which was not helpful to the building industry. Similarly the Government's approach to increasing the stock of houses met problems. A rapid increase in the price of houses occurred. Pries rose rising to £1,000 from its average pre-war price of £250, an inflated price due to excess demand, limited materials and lack of skilled labour. These prices very soon stretched beyond the reach of even the middle classes and when demand slackened so did prices which dropped very quickly - by almost 30% in six months. Between 1920 and 1922 prices halved. This drop was brought about by an increase in the supply of materials, cheaper transport costs, lower interest rates and building costs as builders now with a steady supply of work were willing to accept a lower level of profits (41).

The prices in some areas would probably have dropped even further if many of the older byelaws had been removed or updated. The high prices had led to a greater demand for new houses built for and managed by Local Authorities. The Government who were financing this form of housing (42), had taken a similar line to that expressed by the supporters of the Housing of the Working Classes Bills by ensuring exemption from byelaw control for Local Authority and Housing Society developments. This attitude not only suggested the lack of importance given by the Conservative Government to the health and safety of building byelaws but also provided an easy way out of the dilemma it faced. Consolidation and improvement of the Public Health Acts was a possibility and a way in which the problems could have been minimised. The Government's role, in

association with Councils, of providing houses had given them the attitude of a developer to avoid byelaws and obtain exemption. Conseqently it continued with its policy of relaxation and encouraged the updating of building byelaws. This approach was another advance in the powers of Central Authority in that it could switch from one political incentive to another without the need for the law to be changed. There was of course no guarantee that Local Authorities would respond, after all they jealously guarded their powers of discretion displayed by their slowness in adopting or updating their byelaws.

The Circulars of 1906 and 1912 only drew a limited response and this led to another circular being issued on the 1st September 1922 (43) informing Local Authorities of the urgent need for revising building byelaws and referred to the current urban, intermediate, and rural models. it was emphasised that there was no justification in retaining byelaws that might hinder private development and were not required for safety or sanitation. Whilst the Departmental Committee in 1918 had advised updating of byelaws every ten years, the Ministry of Health considered that more frequent revision was necessary. Authorities were reminded that they could provide temporary relief by relaxing byelaws in respect of dwellings only by using the provisions of Section 25 of the Housing and Town Planning Act of 1919. This Circular did not draw an immediate response as the process of updating byelaws was slow as Dolton stated in his evidence on the Departmental Committee (44). Although questions in the House of Commons prompting the Minister to take action had no immediate effect (see page 176) some progress was being made so that by the end of 1928 some 1,270 Local Authorities had brought their byelaws up to date(45). The tendency was for Local Authorities to adopt the rural and intermediate models which indicated a movement towards less

control and greater freedom for developers.

Despite this slow progress of revision, by 1933 60 Rural Authorities did not have a single byelaw. Not that this affected Government policy as not having byelaws curbed complaints from developers and avoided the need for an up-date. It did of course highlight the variety of byelaw control, or lack of it, that was being exercised nationally. In adddition to the frustration of complying, the variety of byelaws was having a significant effect on the cost of construction. Circular 56 of June 1926 again emphasised the updating of byelaws stating that it was of the utmost importance for the revival of trade and general well-being that proper methods of building should not be forbidden by local byelaws. It illustrated that in other manufacturing countries such as the U.S.A., Germany, Czechoslovakia and Poland, the policy had been to remove restrictions on building and this had benefits in reducing costs and other important undefined areas. It was stated that byelaws before 1913 had impeded invention, mass production, standardisation and industrial recovery, though this was not borne out by the Housing (Building Construction) Committee report of 1918. This report gave clear descriptions of various parts of the construction process where standardisation and mass production methods could be introduced. Byelaws help the process. However, different byelaws restricted the development of standardisation, as it was pointless to manufacture components or materials which were acceptable in one area and not in another and this could occur between adjoining authorities. The Ministry in 1926 had been seeking some degree of uniformity and had advised on Local Authority necessity to adopt current byelaws [46]. But it was not just byelaws that were creating the problems, there were also those authorities who were enforcing their own Improvement Acts which had a building control

content. Whilst the Government had some control on byelaw matters they had little effective control over the administration of Improvement Acts. The approach towards relaxation and exemption continued. The Ministry of Health (Temporary Relaxation of Byelaws) Regulations of 1922 allowed interested parties to appeal to the Minister of Health against Local Authorities who had refused to relax their byelaws(47). This encouragement towards relaxation is further illustrated by Circular C.80 of January 1928 where the Minister thought it undesirable to adopt building byelaws governing the strength of timber unless Authorities had the staff to enforce them, which meant at least one full time building inspector. He was concerned that this would mean regular site visits and taking measurements. For this reason there have never been any such byelaws in the model series after 1918.

This statement would seem to suggest that the Government did not wish to have any requirement in the byelaws that would demand regular inspection of building works and in many cases the appointment of full time surveyors. Local Authorities were expected to administer them as a form of gentlemanly code of conduct! The Circular added that apart from large towns that employed inspection staff, other Authorities should refrain from enforcing their byelaws in the interests of economy in administration as well as liberty in building.

These suggestions would only add to the indifference of enforcement likely to draw even stronger complaints. To follow the recommendations some Authorities would administer and some would not and no great benefit would derive from the exercise. It is just not possible to expect a Local Authority exercising a lawful discretion to adopt and enforce building byelaws, to do so without making any form of check on the construction of buildings. The submission of plans and their checking is only an aid to

the builder, he is able to vary the construction on site and it is really in effective site control that the benefits of building control can be achieved. This was being virtually disregarded by the Ministry of Health.

This Circular clearly advised the non-adoption and enforcement of byelaws controlling the strength of timber, a requirement designed to avoid excessive deflection or even structural collapse. If byelaws were over-demanding in respect of timber sizes the Minister should have informed Local Authorities of more economic timber sizes which would be strong enough to sustain their design loadings rather than advising Authorities not to enforce the law. Furthermore, it was clear that Local Authorities were not encouraged to engage full time enforcement staff and this itself would have an effect on the equality of enforcement, matters that gave rise to discontent and aggravation where builders would be subjected to such byelaws in one area and not another. This was a problem recognised later by the Ministry who, in a memorandum attached to the model byelaws, rural series, of 1932, referred to the problem experienced by builders and architects working in different areas of varying requirements based on the same byelaw. It was suggested that assistance could be obtained from the British Standards Institution on points of issue causing difficulty in interpretation or enforcement.

The series of circulars centred on three main aspects of building control. Firstly, the need to provide a common base; a uniformity of requirement and application. Secondly, the recognition of British Standards and codes of practice and the work of the British Standards Institution and thirdly, the role of the Local Authority surveyor. The Departmental Committee had highlighted four different modes of control and advised against relaxation as being an acceptable option. The Government disregarded the advice and continued with the policy of relaxation of byelaw requirements on Local Authority housing and bringing

about modifications within the building control system by means of advice through circulars. Not only were matters relating to building construction raised but even economics of Local Authorities themselves. The printing of large numbers of building byelaws booklets for sale to the public was not recommended as many were likely to be wasted when the Authority up-dated its byelaws (48). Whilst costs were involved it was more likely the fear that there would be a delay in the introduction of up-dated byelaws until the stock of byelaw booklets had been sold. Some Authorities had reintroduced fees for building byelaw control, presumably to aid their income, reintroducing old Improvement Act practices, but they were promptly advised against this practice which was not only illegal but regarded as highly objectionable by the builders (49). Builders did not seem to object to paying fees under the London system but took every opportunity to ensure that the practice did not spread beyond London. Costs were all important but whilst the Government ensured that the cost of public house building and other schemes approved by the L.G.B. would not be impeded by byelaws the same did not apply to private sector building. Total relaxation was not encouraged and those who sought to achieve this were told that it was not necessary in areas where building byelaws had been brought up to date (50). The recommendations of the Departmental Committee on building byelaws, on improving the byelaw system, were gradually becoming self-evident to the Ministry. The need for up-dating was recognised, even byelaws over five years old were considered out of date (51). The problems of interpretation and enforcement required an independent arbitrator. The Departmental Committee proposed an appeal system but although this was not law the Minister advised Local Authorities that he would give an opinion on such matters if both sides agreed to refer to his arbitration (52). Similarly, the Departmental Committee advised that the reasons for refusing plans

should be stated, and whilst this recommendation had not been brought in as law, the Minister chose to recommend Local Authorities to adopt such a practice [53].

The administrative procedures of building byelaw control varied considerably and these Circulars were an intrusion into local issues advising on points of law which should be adhered to and practices that should be carried out, even where there were no legal requirements, or the legal requirement was considered by the Minister to be out of date. Such was the situation regarding habitation certificates which were issued on the satisfactory completion of construction of houses, a procedure which some Authorities retained under old byelaws, but as the new model byelaws did not contain this provision the practice was requested to stop [54]. Many Local Authorities adopted the practice of retaining deposited plans, but the Minister advised that they were not empowered to do so unless they had adopted Section 16 of the Public Health Act 1907 which permitted them to retain a copy of deposited plans[55].

Despite trying to improve the system, especially on matters of practice and procedure, control by Circular was clearly not desirable. It was subject to political and economic trends which were erratic and could cause as much confusion as it sought to overcome in that this series of circulars requested up dating the byelaws yet at the same time relaxing, not adopting, not enforcing and avoiding the employment of surveyors for inspection and enforcement. Circulars were looked upon as an intrusion into local self-government and consequently it was not surprising to find that these circulars were often ignored. The solution to the erratic control by circular was to introduce legislation based on the recommendations of the Departmental Committee. This the Government failed to do and consequently the problems remained.

REFERENCES

(1) The Committee members were The Rt. Hon. J. Herbert Lewis M.P. Sir, Randolph L. Baker B. M.P., A.E. Collins Esq., The Hon. Eustace Pienaes M.P., E.J. Cowan Esq., E.V. Kelly Esq., W. Jerred Esq., C.B., F.R. Harding-Newman Esq., J. Pointer Esq., W.T. Postlewaite Esq., Raymond Unwin Esq., Henry Vivian Esq.

On the 29th October 1917 Stephen Walsh M.P., Col. Sir A. Griffith-Boscovan M.P. Major David Davies M.P. and W.E. Hart, Town Clerk of Birmingham were appointed to replace the Rt. Hon. J. Herbert Lewis, Major Sir Randolph L. Baker, Major the Hon. Sir Eustace Pienaes Bt. M.P. and E.V. Milly previously Town Clerk of Birmingham.

P.P., Report on the Departmental Committee on Building Byelaws 1918, Cd. 9213, p.2.

(2) Ibid,

(3) Ibid, p.232 paras. 4989-4990.

(4) Ibid, p.11, para. 24.

(5) P.P. Departmental Committee on Building Byelaws 1981, Cd. 9214 Minutes of Evidence p.263, para.5703.

(6) Ibid, p.308, para. 6775.

(7) Ibid, p.307, paras.6760-6762.

(8) THE BUILDER (October 26th 1918), vol.CXV. No. 3951, p.1.

(9) op cit, (as 2 above), p.11, para.21.

(10) op cit, (as 5 above), p.263, para.5711 and p.295, para.6475.

(11) Ibid, p.300.

(12) Ibid, p.278.

(13) op cit, (as 2 above), p.17, para.36.

(14) Ibid, p.17, para.36.

(15) MARTIN GASKELL S, BUILDING CONTROL NATIONAL LEGISLATION AND THE INTRODUCTION OF LOCAL BYELAWS IN VICTORIAN ENGLAND, London, 1983, p.49.

(16) op cit, (as 5 above), p.59.

(17) op cit, (as 2 above), p.18, para.42.
It was considered that the availability of the L.G.B. to determine differences would be a speedier process with minimal delays in the progress of building work.

(18) Ibid, p.42. para.110.

(19) Ibid, p.43, para.114.

(20) Ibid, p.44, para.115.

(21) The Government had secured powers under the Education (Administrative Provisions) Act 1911, to exempt educational buildings approved by the Board of Education. Exemption had already been recognised in model byelaws whereby the byelaws did not apply to Crown Buildings, lunatic asylums, prisons, buildings associated with canals, rivers, docks and harbours and mining worksings. Buildings approved by the Board of Agriculture, Land Commissions or Agricultural or Fisheries Department or buildings approved by or in pursuance of any statutory provision on behalf of one of the principal Secretaries of State. Buildings used for the treatment of infectious diseases.

(22) THE BUILDER (January 16th 1919), vol. CXV1, No. 2962, p.48.

(23) P.P. Housing (Building Construction) Committee Report 1919, Cd.9191, 24th October 1918, p.3.

(24) Rt. Hon. John Tudor Walters.
1868-1933 M.P. for Brightside division of Sheffield 1906. Knighted in 1912, M.P. for Penaryn and Falmouth 1929-1931. Postmaster General in 1919-21 and 31. Formerly Chairman of the London Housing Board. Chairman of the Housing (Building Construction) Committee 1918. President of the Housing and Town Planning Trust. Author of the book THE BUILDING OF TWELVE THOUSAND HOUSES published in 1927. Who Was Who 1929-1940, p.1410.

(25) op cit, (as 24 above), p.28.

(26) BURNETT J. A SOCIAL HISTORY OF HOUSING 1815-1970, Newton Abbot, 1978,p.221.

(27) HANSARD, 4th Ser. Vol.112, p.806 26th February 1919.

(28) P.P. The Housing and Town Planning Act 1919, 9.10 Geo.5, C.60.

(29) HANSARD, 4th Ser. vol.116, p.896 26th May 1919.

(30) P.P. The Housing Act 1923 13/14 Geo.5, C.24.

(31) P.P. The Housing Act 1925 15/16 Geo.5 C.18 Sections 99 and 101.

(32) HANSARD 4th Ser. vol.114, p.1742. Sir D. Maclean speaking in the second reading of the Housing Bill 1919.

(33) Ibid, vol.194, p.1364, 22nd April 1926.

(34) Ibid, vol.251, p.1835, 30th April 1931.

(35) P.P. Report on the Royal Commission on Fire Brigade and Fire Prevention 1923 Cmd.1945.

(36) Ibid, p.34, para.42.

(37) P.P. Report on the Departmental Committee on Building Byelaws 1918 Cd.9214, Minutes of Evidence, Mr. Dolton - Principal of the Legal Department of the L.G.B. p.1, para.5.

(38) op cit, (as 37 above), p.34, para.42.

(39) The Borough of Brighton Building Byelaws 1886 - 19th Novmber 1986, Byelaw 21.

(40) The Factories and Workshops Act of 1901 required every factory erected after 1892 and workshops erected after 1896 in which more than four persons were employed to be furnished with a certificate from the Local Authority that a satisfactory means of escape in case of fire had been provided. Model byelaws for factories with less than forty employees were issued by the L.G.B. in 1906 (See Appendix 17) but up to 1919 only 52 Urban Authorities had adopted such byelaws, a mere 4% of the total number of authorities eligible to make and enforce such byelaws (by December 1922 the number was 71). Even where enforced, the byelaws did not make satisfactory provisions for safety. In 1920, 379 fires occured resulting in complete suspension of work at some factories and 22 fatalities being reported to the Factory Department. Yet despite the appalling record of Local Authorities in enforcing the provisions of the 1901 Act the Commission recommended that the existing law be strengthened to require Local Authorities to issue certificates to factories and workshops where more than 20 persons were employed or more than 10 at first floor level and that these requirements be applied to both new and existing buildings. The Secretary of State had power to make regulations on means of escape which would

provide some degree of uniformity between Local Authorities in their enforcement of such standards. In the event of any alterations should the building no longer be satisfactory the Local Authorities were required to cancel the certificate.

(41) POWELL C.G. AN ECONOMIC HISTORY OF THE BRITISH BUILDING INDUSTRY 1815-1979, London, 1980, p.93, p.80, PP.80, 93.

(42) Housing financed by a subsidy under the Housing (Additional Powers) Act 1919 and the Housing Act 1923.

(43) Ministry of Health Circular No. 332 1st September 1922.

(44) op cit, (as 39 above), p.5, para.30.

(45) Ministry of Health Circular No. C.46, dated January 1928.

(46) Ministry of Health Circular, C.41, 1926.

(47) Ministry of Health Circular, No. 343 dated 28th September 1922.

(48) Ministry of Health Circular, C.70, dated June 1927.

(49) Ministry of Health Circular, C.34A, 1928.

(50) HANSARD 4th Ser. vol.280, p.2009, 20th July 1933.

(51) Memorandum attached to the Ministry of Health Model Byelaws Rural Series 1932.

(52) Ministry of Health Circular dated 1st September 1935.

(53) Ministry of Health Circular C.46, January 1927.

(54) Ministry of Health Circular, 1st September 1935.

(55) Ministry of Health Circular C.44, January 1927.

CHAPTER 7

THE PROFESSIONAL APPROACH

The constructional specification in the Housing (Building Construction) Committee report was an example of how professional assistance could produce a document that was understandable, informative, practical and related to sound economic building. The involvement by the D.S.I.R. showed the immense value that could be obtained from research into building materials and technology. This professional approach to research developed further when the D.S.I.R. recommended the establishment of a Building Research Board (B.R.B.) in January 1919[1]. The tasks of the Board would be: (1) to increase scientific knowledge on most materials used in buildings; (2) to assist in the development of new materials; (3) to assist in the process of manufacture; (4) to investigate methods of construction, giving assistance to Government Departments in questions raised by them; (5) to conduct research on fire prevention and fire resistant construction and (6) to instigate research on the construction of roads, drains and sewers.

The Government did not foresee any responsibility for research falling on the building industry itself or on the associated professions. Research was to be regarded as a matter of public interest. The proposal to establish the B.R.B. was strongly supported by the R.I.B.A. and the Society of Architects. Accordingly the Board was set up in February 1920 having acquired premises in Acton together with temporary accommodation at the Brixton School of Building. It moved to permanent accommodation at Garston, near Watford, where a large country mansion had been acquired and where the Board has remained although it is now known as the Building

Research Establishment (B.R.E.). In its first published report the Board set out amongst its duties: (a) research into the behaviour of building materials and (b) the application of existing knowledge to resolve immediate problems. Thus began a practical scientific approach which in later years would encompass other fields including the formulation of building byelaws.

One of the early problems the Board was involved in was the use of steel for constructional purposes. Steel had made considerable advances in structural frameworks or component elements of buildings since the earlier times when cast iron was used. The ability of steel members to span large openings and support greater floor and roof areas gave architects greater freedom in design which was eagerly demanded and accepted by Victorian entrepreneurs.

Building byelaws had not fully taken account of the use of steel as a load bearing structural element, despite the increased use of this material. Byelaws remained firmly entrenched in the use of masonry to carry the main loads of the building, although regulations were introduced in London in 1909 to control the construction of steel frame building[2] when regulations were also introduced to control reinforced concrete. The situation arose where the masonry regulations were applied alongside the steel regulations, consequently masonry walls were required to the full load bearing thickness despite the load bearing steel framework. This produced expensive and unnecessary construction. Building byelaws permitted external walls to be of a framework which could include the use of steel provided it was of sufficient size and strength and properly framed together. It was not uncommon for Local Authorities to permit different working stresses for the steel which in turn affected the size and consequently the cost. Not unnaturally

builders objected[3].

Steel framed buildings were increasing in popularity following the development of large skyscraper buildings in America. Since 1866 steel joists were rolled whole, although beams continued to be made from steel-plate rivetted together. When Dorman Long began rolling steel joists in 1885 the use of cast and wrought iron beams soon became uneconomical. The economic use of steel depends upon its quality and its working stress. Structures have two main problems, buckling and bending, and theories in calculating these two properties in steel were established in 1759 and 1826 [4]. These theories were continually developed which enabled a more confident use of steel in buildings. To arrive at a reasonable working stress a factor of safety against failure was assessed and this was generally taken as a quarter of the average ultimate strength of the material. On this basis the London City Council determined that the working stress of steel was $7\frac{1}{2}$ tons per square inch. A higher factor of safety was introduced for columns to allow for imperfections in the material that introduced some bending in addition to compression [5]. Dead loads were calculated on the weight of materials while live loads were a matter of guesswork. To arrive at a reasonable working live load for domestic or small office premises a factor of safety had to be allowed for. As we have seen, steel stresses were a quarter of the ultimate stress and when this principle was applied to an ultimate load of a tightly packed crowd of people, say about 160 lbs per square foot, then the working live load would be 40 lbs per square foot. This calculation would be made in respect of industrial and commercial loading to produce live loadings for various types of building. When these principles were applied to multi-storey buildings it tended to produce an over design which added to construction costs.

It was most unlikely that every floor of a multi-storey building would be loaded to the maximum working live load and therefore some reduction could be made. The Americans were in advance of the British when it came to constructing multi-storey buildings and the building regulations of Chicago and New York had taken account of this problem. A five percent reduction was allowed in live loads to each floor below the top most floor. Thus the top floor was 100%, 95% for the floor below, 90% the floor below that etc., however no floor load could be reduced to below 50%. This principle was adopted in the London Building Acts of 1909 but it did not appear in the model building byelaws until after 1936, which only emphasised the need for the legislative changes the Departmental Committee had recommended in 1918. Yet the M.O.H. felt they could change by circular.

Despite the byelaw requirement it is also necessary for any architect or engineer to ensure that the building remains sound as any collapse would ruin the designer's reputation and retard the further development and use of steel or indeed reinforced concrete. Consequently many buildings were over-designed and this invariably resulted in costly construction. To introduce new materials into low cost housing a reduction of cost had to be achieved. This required a reappraisal of stresses, strain and the theory of structures to produce smaller and more economical sections using higher quality steels that had improved working stresses. Byelaws were not made to accommodate new materials or methods but merely to restrict or prohibit the use of existing products that were known from experience to perform badly.

Research encouraged the development of building technology. This was the only way forward because the conservative approach to the modification of byelaws took far too long for assessments to be

considered and evaluated. There was a growing need to move from the more traditional empirical approach to a scientific approach which accepted investigation, analysis and experimentation as a sound basis for accepting constructural changes and until this step had been made progress in byelaw development and acceptance was some way off.

This approach began when the problems surrounding the evaluation of methods and regulations for the design of steel structures were referred to the Building Research Department (B.R.D.)[6] by the Minister of Health. The London City Council had been criticised for being backward in not updating their byelaws, although this was partly due to the lack of resources the London City Council had available for the investigation of this particular problem. Hence the value of the B.R.D. who were in an independent position to produce a professional report in which political issues were hard to place. Consequently the reports of B.R.D. helped produce some degree of uniformity in London Building Act requirements and building byelaws. An update of the 1915 London City Council regulations on reinforced concrete was also sought for the same reasons and the Minister was also challenged on the need for Local Authorities to update their byelaws on these matters.

Some improvement had been made in this area but it was noticeable that technological advances in structural steel and reinforced concrete were outstripping the Government's ability to keep its statutory requirements abreast of these changes. A further example was the advances in the manufacture of cement and the Ministry was questioned on this matter as it was alleged the London City Council were using obstructive tactics and it was thought that such regulations were no longer necessary.

The continuing problem of Local Authority discretion was again surfacing but in this case it provided the Minister with the excuse that

he was not able to control the way Local Authorities administered their responsibilites. This was by no means a satisfactory answer, but it did again emphasise the problems of discretionary control. Meanwhile the B.R.D. was working on a code of practice for the use structural steel in buildings and their recommendations were incorporated into British Standard 449. This was the first national code for structural steel work and as a result of this work the London City Council asked the B.R.D. to prepare a similar code for reinforced concrete. These codes of practice not only provided uniformity, but also an understanding of building problems and their solutions. As we have seen these codes were used as a footnote to byelaws and were a guide to meeting the requirements of the byelaws. The footnotes helped to produce a more uniform interpretation and application that could be acceptable to all Local Authorities. Eventually they were written into the byelaws and became known as "deemed to satisfy" specifications. The use of British Standards in this way and availability of the B.S.I. to give advice to Local Authorities on interpretation and enforcement, was a valuable contribution which emphasised the importance of the professional approach as a necessary ingredient in the statutory control of building. The basis for uniformity of understanding and application was at last established. Further work added greatly to understanding the application of building technology to meet design criteria, easing the problems of making and enforcing building byelaws. However, research takes time and time is also needed to assess the overall performance of new materials and methods. The work of the Building Research Station (B.R.S. previously the B.R.D.) was proving an asset in the solution of building problems but it was not specifically structured to provide a solution to the problems surrounding building byelaws, although their involvement with byelaws has

evolved through the practice of research [7]. This involvement was based on concern; concern that having spent considerable time and effort solving a building problem only to find the attitudes of that research thwarted by an outdated byelaw modeled in specific terms. This had to be avoided if research was to become creditable and readily acceptable. The Board firmly expressed the view that byelaws should specify the performance to be obtained leaving open the method of attaining the required standard. These views were made known to the London County Council in 1931 at a time when a revision of their regulations was contemplated and again in the Boards Annual Report of 1936 [8]. The issue of circulars and the addition of footnotes to byelaws was one way the Ministry of Health indicated that to some extent they shared those views.

The further problem that the M.O.H. Circulars tried to control was the way in which byelaws were enforced despite the views previously expressed by the Minister of Health. This depended not only on the attitudes of the elected representatives to these responsibilities, but also on the structure of the Local Authority staff and in particular the professional and technical skill of the persons responsible for the administration and enforcement of the byelaws. Unlike the London Building Acts and the Improvement Acts of Liverpool and Bristol there was no statutory requirement to appoint surveyors and this allowed the appointment of persons without regard to the nature of the officer or his qualifications. This gave Local Authorities wide scope and whilst many appointed knowledgeable surveyors we have already seen that many did not. the criticisms that were directed at those surveyors were rarely directed towards the District Surveyors appointed under the London Building Acts. The District Surveyors were unique amongst surveyors in England and Wales

who administered building law. They were paid by fee income and they also enjoyed private practice which provided further income. District surveyors who did not have a private income found that fee income was inadequate and rather than accept a salary as proposed by the London City Council in 1906 their association unsuccessfully sought the removal of restrictions on private practice which had been creeping in since 1901. The situation remained unsatisfactory until the District Surveyors became salaried officials in 1940.

The salaries of officials outside London varied considerably. Whilst the senior officials such as town clerks and borough surveyors enjoyed a salary commensurate with their qualifications and experience this did not apply amongst the junior staff. In 1899 some sanitary inspectors in the London area were being paid less than £2 per week, a sum which was considered a reasonable wage[9].

The Local Government Board did not seek to influence Local Authorities in their appointment of surveyors. These posts usually covered many tasks in addition to building byelaw administration including such matters as sewage disposal, drainage, street works, and municipal building maintenance. The larger Borough and Urban Authorities tended to appoint engineers who would have the additional responsibility of enforcing building byelaws but this was not so apparent in the smaller Authorities because there were less extensive municipal works and often these works were designed and carried out by private consultants and contractors appointed by the Authority. The growth of municipal works being undertaken by the Authorities led to the formation ofthe Institution of Municipal Engineers (I.Mun.E) in 1873. This Institution first conducted examinations in 1886 which included the subject of building construction and law and byelaws [10]. However, many of the

Local Government officers qualified by such examinations did not carry out the inspection of plans and building works but appointed junior staff for this purpose. There were no criteria or examination structure for such officers, but when the 1936 Act proposed a more uniform system of building byelaws throughout England and Wales with an improved administrative system, the Institution introduced an examination for Building Inspectors in 1937[11]. This examination was not the first of its kind. The R.I.B.A., founded in 1834 became involved in examining the competency of suitably experienced candidates for the office of Building Surveyor to Local Authorities as required by the Metropolitan Building Act of 1855. The first meeting to consider what conditions should apply was held on the 22nd December 1855. The first candidates were awarded Certiticates of Competency on the 29th January 1856 [12]. This examination was primarily related to the administration of the London Building Acts. The examination procedure was later developed into the District Surveyors Examination.

The R.I.B.A. maintained the examinations for candidates for the Office of Building Surveyors to Local Authorities but neither this examination nor that of the I.Mun.E of 1937 was a statutory pre-requisite to appointment with Local Authorities. Consequently, the standard of surveyors varied considerably throughout England and Wales and no doubt contributed to the widely differing standard of interpretation and enforcement. Other professional bodies also catered for the professional needs of building surveyors. The Institute of Surveyors, formed in 1866, now known as the Royal Institute of Chartered Surveyors (R.I.C.S.), introduced examinations in 1881; they became compulsory as a professional qualification for all candidates in 1891 [13]. The examination had three divisions, one of which was building surveying. These examinations have

been maintained and improved but the specific subject of Building Regulations has only been included in the examination syllabus since 1972. However, the subject matter relating to building control was at a standard that would permit a successful candidate to understand and apply the specific requirements of the building byelaws. The Incorporated Association of Architects and Surveyors (I.A.A.S.) formed in 1925, was eventually to provide a separate examination and division for municipal building surveyors whose main responsibility was the administration of building byelaws and associated law, but this was not effective until 1952.

The Departmental Committee in 1918 did not recommend that Local Authority surveyors needed to be statutorily appointed and qualified in a similar manner to the District Surveyors of London. Such a recommendation was outside the scope of their brief, nevertheless the point could have been made as the London system was recognised not to cause so many problems amongst the builders. The independence of Local Authorities was also another matter that had to be considered. Governments were reluctant to require building byelaws to be administered in defined ways and it has been said that Local Authorities are responsible bodies who best know how to conduct their own affairs. This maintained the discretionary independence over the adoption and enforcement of byelaws.

An aid to the better understanding of building byelaws was the publication of books explaining byelaw requirements, such as Knight's annotated Model Byelaws. The first edition of this book appeared in 1883 and it has remained in publication ever since, being regularly updated. The book gave a background to the making of the byelaws, notes on their requirements and comment on Ministry circulars and legal judgements. Publications such as this made a substantial contribution to the

application of building byelaws and were valuable to both the builder, architect and enforcing surveyor in trying to achieve some degree of uniformity. Helpful as these publications may have been, it still remained essential for the surveyor to have a good understanding of building technology so as to enforce building byelaws correctly. The professional bodies recognised this within the examinations and requirements of entry to membership. Neither the Public Health Acts nor the Local Government Acts required Authorities to appoint certain officers although the post of Clerk, Treasurer and Surveyor were quite common. It was not until the Local Government Act of 133 that Local Authorities were required to appoint certain officers(14), one being a surveyor, apart from Rural District Councils who had the discretion not to appoint such an officer. This in many respects was reasonable for small Rural Authorities who did not require a full-time officer. In such circumstances the duties of building byelaw administration were often undertaken by the sanitary inspector. Whilst the Act specified the post it did not specify any qualifications for the appointment and an opportunity was lost to improve the building control system. Thomas Cubitt, in evidence to the Poor Law Commission in 1842, had said "anything in the nature of a building Act that is not equally and skilfully administered will aggravate the evils intended to be remedied". (See page 40). How right he was, yet the quality of enforcement, although criticised as poor, was not remedied despite the interest of professional bodies in raising their standards.

As we have seen the increasing complexity of building construction necessitated the establishment of the Building Research Station to investigate the technology of building materials to provide a greater

understanding and a solution to many of its problems. The work of the B.R.S., and their assistance in the development of British standards and building byelaws meant that the complexities of such technology found their way into the codes and byelaws. If the technical and professional qualifications of the officers enforcing the byelaws were not of an acceptable standard then this matter could not be resolved where Local Authorities maintained their independence as to the selection of staff they wished to appoint and the Government would not aggravate the situation by insisting on such standards. However, until uniformly high standards were introduced, the differences of interpretation, administration and enforcement remained - often to the annoyance of industry and the professions. This necessitated the willingness of Local Authorities to undertake their responsibilities by adopting the latest byelaws and taking the trouble to ensure that their enforcement was properly carried out. The recommendations of the Departmental Committee were still sitting on the shelf and needed to be taken off, dusted down and brought into effect. The Housing (Building Construction) Committee had clearly shown the need to construct houses to a high standard. This was by no means unrealistic or utopian as a lot of consideration had been given to the problems facing the building industry, its economies and the benefits of standardisation [15]. "Up-to-date" byelaws were a vehicle by which this could be done but as Dewsnup points out, no great improvement will be achieved unless byelaws and regulations are enforced [16]. This important aspect of building control was constantly put aside by both Local Authorities and by the M.O.H. who tried to achieve their aims through circulars instead of updating the legislation. It is quite clear that this approach had limited success, the continuing prodding of Local Authorities encouraged many to respond but equally many did not, often

increasing the problems rather than diminishing them. In those areas the benefits of up-to-date byelaws on new development did not accrue nor did they stimulate the technological advances the building industry wished to apply. Circulars that at one moment criticised Local Authorities for acting in an ultra viries manner and then sought their assistance to do just that, demonstrate the indifference of Local Authorities to political pressures that varied quite frequently. The Departmental Committee had at least made an attempt to find a solution, yet its recommendations had been ignored. The R.S.C. in 1871 had stated "Whatever concerns the whole nation must be dealt with nationally, whatever concerns only a district must be dealt with by the district " (16). The problems unearthed and the solutions put forward by Committees, Commissions and the interference imposed by circulars, clearly indicate that even local administration was becoming a national issue and ultimately could only be solved by national Governmental action. Since 1918 legislation had been consolidated in respect of education, town planning and poor law; the laws relating to highways, housing and public health needed similar attention.

In 1930, the Government appointed a Departmental Committee for the Consolidation of the Law relating to Local Government and public health whose terms of reference were "with a view to the consolidation of the enactments applying to England and Wales (exclusive of London) and dealing with (a) Local Authorities and Local Government, and (b) matters relating to the public health to consider under what heads those enactments should be grouped in consolidating legislation and what enactments of the existing Law are desirable for facilitating consolidation and securing simplicity, uniformity and conciseness" (18).

Certainly the demands of the building industry were simplicity, uniformity and conciseness and the Departmental Committee on Building

Byelaws had made constructive proposals on that basis in 1918. After twelve years, the responsibility to review and introduce those recommendations fell on the new Committee and there was no guarantee that the recommendations made in 1918 would be accepted and implemented by the Government in the 1930s. The Committee produced its first interim report in March 1933 together with the draft of a Local Government Bill which would deal with the first part of the terms of reference namely consolidation of Local Authority legislation. Minor amendments were made to the draft Bill in consultation with Local Authorities and various Government departments and it was eventually passed by both Houses, receiving Royal assent on the 17th November 1933. The Local Government Act 1933 (19) reduced the number of Local Authorities by permitting agreed boundary changes. Large, and enlarged, boroughs could obtain "County" status and this enabled those Authorities to undertake County Council responsibilities, yet at the same time retain the responsibility to enforce building byelaws. These enlarged Authorities could now afford to increase or improve resources allocated for this work provided they had the political will to do so.

The Act recognised the need to appoint certain officers to conduct the administration of the Council's responsibilities. These officers were County Clerk, Treasurer, Medical Officer of Health and Surveyors, while Boroughs and Districts had to appoint a Clerk, Treasurer, Surveyor, Medical Officer of Health and Sanitary Inspectors. There were no set standards of qualification for any of these officers nor defined areas of responsbility but it was normally found that the tasks of the post determined the necessary professional expertise and qualification of the particular officer. Consequently it is not surprising to find the work of a Clerk required the appointment of a Solicitor, that of a Medical

Officer of Health, a doctor, the surveyor needed to be a Civil or Municipal Engineer whilst the work of the Treasurer required the expertise of an accountant. This was not always the case in smaller Authorities. Boroughs, Urban and Rural Districts alike often combined the post of surveyor and sanitary inspector, or Clerk and Treasurer and it was not unusual to find that responsibilities relating to housing, town planning, drainage, sewage disposal, water supply and building byelaws enforcement being carried out by unqualified assistants or encompassed within the control of a person qualified in other matters. Whilst the statutory requirement to appoint certain officers was helpful it did not extend far enough into specific responsibilities such as building control. Neither was there a requirement for such persons to be qualified by examination as we find in the London system. The consolidation process did not permit account being taken of the London system and a further opportunity was lost in seeking uniformity that could be helpful on a national scale. This situation continued to permit Local Authorities the discretion of staff selection and where vested interests dominated the quality and quantity of building byelaw surveyors varied enormously.

The Local Government and Public Health Consolidation Committee presented their second interim report in January 1936. This report contained that part of the terms of reference dealing with the consolidation of the public health law. The Committee began work on this task in November 1933 and held 59 meetings. There had been sixteen Public Health Acts introduced from 1875 to 1932, but only the 1875, 1890 and 1907 Acts related to building byelaw control. Even these three Acts required simplification to avoid duplication and to be consolidated into a single enforceable Act. This was not an easy task. The 1875 Act itself was a consolidation of a larger number of Acts each drafted by different

Parliamentary draftsmen each using their own drafting language, yet in the end these different Acts were to be united into one comprehensive Act. Many of the previous Acts were adoptive and the Committee considered that although the principle of adoption was reasonable it had in the past been overdone and it was necessary to review the principle and how, if at all, it should be retained in the new Bill [20].

The basic system of building control by the adoption and enforcement of building byelaws was not to be changed - a proposal originated by the Departmental Committee on Building Byelaws which considered that the system of control was not in dispute, only the mode of control. Despite the problems caused by the discretionary power to adopt byelaws, the Bill proposed to retain this power with a proviso that would enable the Minister to make byelaws in areas where it was considered desirable either by public demand or Ministerial enquiry [21]. This power of intervention, however, did not extend to the day-to-day administration or to the quality or extent of enforcement although this was always a possibility through Departmental Circulars.

The Consolidating Committee was aware of the considerable controversy and litigation over building byelaws and that the subject had been extensively investigated by the Departmental Committee on building byelaws. This was an opportune, long-awaited time to incorporate recommendations of that Committee into any consolidation proposals. Since 1918, many more Authorities had adopted building byelaws due partly to urbanisation, creeping into many rural areas following improved road and rail communications which encouraged such development. In these rural areas lower land costs enabled cheaper houses to be built which became attractive to the buyers. Also there had been continual, if infrequent reminders by the Ministry of Health to adopt or revise byelaws. The

Committee was in agreement with the three different models, urban, rural and intermediate, as many areas of sparse population did not require complex byelaws [22].

Whilst it was politically expedient to agree with the retention of three different models of byelaws on the assumption that they did not cause problems especially to speculators, this situation was building up problems for the future. Byelaws could have been framed to include all types of development and due regard given to isolated properties. What may be considered to be rural development at one time could easily be urbanised by infill development and isolation distances reduced whereby spread of fire through extensive use of combustible material was significantly increased. Similar situations applied with drainage and sewerage disposal.

The draft Bill imposed an obligation on Authorities to make byelaws but did not bind them to do any more than this, even when required by the Minister [23]. This freely allowed Local Authorities to make byelaws, and yet not effectively administer or enforce them in any manner that would restrict jerry building, in much the same way that the provisions of the Public Health Act had been adopted and not acted upon. Although this criticism had abated due to the removal of many rigid and stringent byelaws, nevertheless the Law allowed indifference to persist. The opportunity should have been taken to place a greater emphasis on the duty of a Local Authority because if the Government considered building byelaws had beneficial social effects in terms of public health and safety, there should have been no discretion and more positive direction given to administration and enforcement.

This is a problem associated with the consolidation of existing law whereby existing practices are retained as the consolidation process does

not readily permit the formulation of principle law. Removing discretion would be a principle that would be strongly fought against even if the mere suggestion of it was introduced. The Government was to maintain its control of Local Government through the imposition of Ministerial control and penalties. One important change was the power for the Minister to make byelaws in any Local Authorities area where that Authority had failed to do so.

The Consolidation Committee considered that existing byelaws should be revised after a period of three years after which they should be reviewed every ten years as recommended by the Departmental Committee. This was inserted into the Bill with the proviso that the Minister could extend the period if necessary [24]. This, in effect, meant that existing byelaws would no longer be effective after the 31st July 1939. The Committee recommended that any extension should only be for periods of six months up to a maximum of eighteen months allowing ample time to enable Local Authorities to renew their byelaws, failing which the Minister would make them. The Bill retained the provisions of the 1907 Act in that approved plans would be of no effect after three years where building works had not commenced, thereby placing the onus on the developer to resubmit plans and construct in accordance with the current building byelaws. The approval of plans could only be withdrawn by notice. Not to withdraw approval would be reasonable if the Local Authority had not altered its byelaws in the past three years but alternatively, the Authority would be lacking in its responsibilities if it failed to withdraw approvals where the byelaws had been up-dated.

The original intention was that the builder would derive financial benefit from complying with up-dated byelaws. This was true in many instances where revised byelaws, for example, permitted thinner walls.

However it had the opposite effect where byelaws had been extended and placed controls on parts of the structure that had not been previously controlled. This was particularly apparent where the content of building byelaws had to take account of local variations due to local Acts. This had extended the byelaw making powers of Section 157 of the 1875 Act and Section 23 of the 1890 Act. These Acts had qualified the making of bye byelaws as to their purpose such as "for securing stability and prevention of fire and for the purpose of health" and "to secure a free circulation of air". The Committee considered that by excluding these qualifications it would be possible to make byelaws covering most, if not all, of the matters Parliament had given in local legislation (25). In addition, it would make it possible to make byelaws to deal with materials used in buildings to control transmission of noise, a matter that was currently of concern to the Building Research Station which had started conducting tests in 1929 to measure sound transmission between flats in a building. The construction of buildings containing flats represented a growing trend in low cost housing especially in areas with high land prices. The density of units were much greater permitting a lower cost. The construction, using traditional materials, meant that timber floors separated the flats which allowed sound to pass through all too easily. The interference on the privacy of family life by noise generated from another source can affect a person's health and this was beginning to be realised as a health problem. Much of the problem could be prevented by constructing separating walls and floors using dense material such as brickwork and reinforced concrete but until the building byelaws had been amended to permit the use of materials and mode of construction the problem was likely to get worse. Accordingly the Committee recommended the all-embracing wording of "the construction of

buildings and materials used in the construction of buildings". This amendment would enable a more flexible approach to the making of byelaws which was a distinct advantage in terms of technological requirement but had the disadvantage to the speculative builder that byelaw making powers could be extended without the need to extend the legal base. There were sections of the Public Health Acts that applied controls on drains, sewers, and sanitary conveniences and the Committee considered that these were allied matters and in effect part of a building, so that to divorce these requirements from byelaw making powers would be wrong in that it would destroy effective administration (See Appendix 18). However,it was considered byelaw making powers relating to streets and to unfit houses would be adequately covered by highway and housing Acts. This, in effect, enabled public health law to be streamlined and not to affect requirements on matters not associated with the construction and sanitation of buildings.

The administration of byelaws had always brought about complaints, sometimes of the byelaw itself, but more frequently on the way it was (or was not) administered. The Departmental Committee in 1918 had recommended that it was essential that where plans had been refused, the Local Authority must state the byelaw that had been contravened. This enabled aggrieved parties to challenge the Local Authority to justify their reasons in a Magistrates Court. In addition to the right to refer disputes to the courts, parties may jointly submit their case to the Local Government Board for determination. This was the softer, less expensive option. These provisions had been recognised by the Consolidation Committee and incorporated in the new Bill, a voluntary practice agreed by the Minister in 1932 (see page 187). In conclusion, the Consolidation Committee emphasised that they were conscious that

their task was not to produce an ideal law of public health but a working consolidation of existing law. Parliamentary time did not allow further consideration and therefore the report had been produced at the risk of errors and omissions. The Committee's report was presented on the 10th January 1936 with a draft Public Health Bill which the Minister of Health announced its publication on the 27th February.

The recommendations put forward by the Committee represent another incremental advance in the development of the byelaw system. The Committee was restrained as to what action it could propose. It was not able to produce a radical solution that either threw off the chains of Central Government or discarded Local Authority control in favour of an alternative system. The Committee was not allowed to consider the London Building Act system and its consolidation with the rest of England and Wales.

With the development of the byelaw system, the London system, despite its longer history, was becoming an anomaly in building control terms. Its inflexible Acts together with the wide discretionary powers of the District Surveyors, were often held as a shining example of how building control should be administered. Certainly it did not accumulate objections in the manner that the Local Authority byelaw system did. Much of the strength of the London system lay with the powers of interpretation, application and administration by the District Surveyors who were able to resolve constructional problems on site, where they should be resolved, as opposed to the Local Authority system of criticising deposited plans and frequently avoiding or being asked to avoid, site control. The Departmental Committee had thrown out control by an Act because of its inflexibility to respond quickly enough to technological change, and consequently favoured the byelaw system which

appeared to be more flexible. However, the experience gained from the way Local Authorities undertook their role showed that the system was frequently far from flexible. Yet the mode of administration had distinct advantages and offered a solution to the problem of control being exercised by Central Authority through a delegated system of District Surveyors which could have broken the polarities of interest between the Central and Local approach. Total centralisation was not welcomed and this action would no doubt have been fought against by the various associations of Local Authorities but the recommendations did not go far enough in placing a duty on enforcement which had been more in keeping with the views of the Departmental Committee in 1918. Instead, the Committee recommended greater central control by giving the Minister power to require Local Authorities to make byelaws but failed to find a solution to force them to respond by enforcing byelaws they had made. Consequently, the weaknesses remained which would permit the continuance of indifferent interpretation, application and enforcement.

The recommendation that all existing byelaws would have to be replaced by new byelaws was a distinct advantage. For once, all Authorities would be adopting a new model code and apart from a few variations that no doubt would be sought by some Councils, the new code would at least allow some positive progress towards uniformity. The Bill, when presented to the House of Lords, was referred to a Joint Committee of both Houses [26]. The exemption clauses were viewed with concern but the Board of Education had no intention of relaxing the exemption rights which they had obtained in 1909 and this subject was not pursued when assurances were given that the Board would maintain byelaw standards [27]. This was a step in the right direction in that due recognition was given to maintaining basic standards of health and safety

without the interference of Local Authorities.

To assist in achieving byelaw standards greater use of British Standards was called for especially where byelaws were not clear or inappropriate [28]. It would have been advantageous to develop British Standards and Codes of Practice so that these documents could have been accepted as the legal standard. However codes and standards go far beyond that needed for health and safety reasons and to adopt the whole document would have extended building control beyond the criteria of health and safety. Whilst it was possible for certain sections of codes to be specially quoted in a byelaw it was better to leave byelaws, codes and standards as separate documents. Furthermore, it was too big a step to be taken at this time. It seemed better to allow Local Authorities and developers to agree the areas of compatibility between byelaws and codes and these areas could grow closer together when byelaws were updated every ten years. This period of time, as we have already noticed was too long, allowing the inefficient Local Authority not to bother with their own periodic updating. The period should have been reduced to five years. The proposal to review building law as to consolidate into a single separate Act was beyond the scope of the Bill although in itself was consolidation of the public health aspects of building law since 1875 and went some way to meet that proposal and could be considered as an expression of Government agreement with that idea[29].

The Bill was not perfect but it did make compulsory what was previously adoptive and as public health law developed similar amendments in the same direction should follow. For a summary of the growth of building byelaws from 1858-1936 see Appendix 19. In completing its passage through Parliament it was expressed that the Bill would be of great benefit to administrators, owners and builders alike. The Bill was

not put forward as an ideal code but as a foundation on which future amendments could be soldily built [30]. On the 31st July 1936 [31] the Bill became law and its success can be measured by the total lack of amendments to the building control measures necessary in the next 25 years.

For what was described as an imperfect Act it has worked extremely well. The administrative provisions and penalties remain the basis of building control in England and Wales. It was not satisfactory in resolving the problem of updating of byelaws and flexibility of operation. Local Authorities still remained indifferent to their responsibilities which resulted in national building regulations being imposed upon Local Authorities as a result of the Public Health Act 1961. This Act also provided for relaxation of certain regulations that were acting onerously thus providing a greater degree of flexibility. National regulations could be updated at any time by the Government, and Local Authorities merely had the task of enforcing them. The powers of building regulations were widened further and procedural changes introduced to achieve greater flexibility with the introduction of the Health and Safety at Work Act of 1974. This Act also reintroduced the charging of fees for building control services bringing back once again those provisions that were first seen in the early Improvement Acts and making the system in England and Wales a little more compatible with the London system. As we have continually seen the poor performance of Local Authorities in respect of staff resources allocated towards building control was brought about as a result of two factors. Firstly the law outside of London did not specify the appointment of suitably qualified Surveyors and secondly, discretionary administration.

As a spur to attaining a more effective local administration the

Conservative Government introduced the Building Act of 1984. This Act recognised the necessity for suitably qualified persons or organistions to administer the building regulations and allowed them to set up a building control administration in competition with Local Architects. These persons or organisations would be known as "Approved Inspectors", the first to do so was the National House Building Council whose service was limited to new houses which were also subject to their ten year warranty. In addition building regulations were again amended. In 1985 they appeared as functional or performance requirements allowing a more flexibile approach to achieving the principles set in the Regulations. At long last Pites' views, and those who had championed that cause, had finally been accepted. However, despite these important changes many of the requirements of the Building Act 1984 are clauses transferred from the Public Health Act of 1936. There are many changes yet to come and this has to be expected if the legal and technical base of the control system is to keep pace with the changing needs of society. Nevertheless, the system of building control in England and Wales has, since 1840, been generally successful and has stood the test of time.

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CHAPTER 8

CONCLUSIONS

A hundred years had passed since the first demand for building regulation in England and Wales, outside of the metropolitan area of London. The introduction of building controls and their development had been a slow incremental process of public administration. In the previous chapters it has been noted how public interest had been established, demands made and legislation introduced firstly by Local Government, secondly by Central Government. The problems relating to the type of controls introduced whether by rigid Acts or more flexible byelaws (albeit with specific requirements) have been considered as have the difficulties associated with enforcement. These three elements, legislation, regulation and enforcement are the basics of any system of building control [1]. They have some social and technological implications and in this concluding chapter these implications will be drawn together.

Legislation

The spread of fire and disease were the main areas of concern by a society wishing to protect its interests in maintaining reasonable standards of health and safety. The incentive to exercise control always followed a disaster, such as a large fire or epidemic disease, and stemmed from the smallest unit of a structured local organisation which represented the general interests of a community. Legislation by disaster is how Garnham-Wright describes this approach [2] who quite rightly argues that it will continue unless adequate money is spent on investigating hazards so as to predict safeguards that may be necessary.

Whilst such facilities were beginning to emerge with the development of the Building Research Station after 1920, it was not the situation in the nineteenth century. The motivation to secure legislation was the public outcry following a disaster indicating clearly the concern and need for buildings that would provide a safe and healthy environment. Representing those interests were Town Councils some of which were well motivated and organised to introduce local legislation to bring about desired change in the form of Improvement Acts. These Acts were usually backed up by knowledge, the incentive of local control and the desire to achieve change. Not all Councils were that motivated in their approach, often lacking coherent policy and knowledge,(3) not exercising local concern (4) and unworthy of their powers(5). These qualities do not lead to success. This resulted in Central Government intervention as local issues became national ones. In testing this intervention against the principles of necessity and efficiency argued by Dewsnup (6) it can be seen that the devastating outbreaks of cholera established the necessity and the inability of Local Government to respond on a national scale meant that Central Government was the only organisation that could exercise that control effectively (7). This inability was largely due to the efforts made to protect vested intersts and the rights of the property owner. Even when Town Councils had successfully battled against these attitudes the intervention by Central Government, with good intent, was often viewed with suspicion to such an extent that co-operation between the two administrative elements of Government was almost non-existent. To maintain the interest and cooperation of Town Councils the Government made the law controlling building permissive and not madatory. Those Councils in greatest need of the law eagerly accepted these new powers, acted with great enthusiasm and achieved much, whilst

many did not, frequently failing to exercise their discretion in the interests of health and safety. This situation is certainly not in the national interest. National mandatory legislation is by far the most effective way of achieving the aims of any legislation made in the national interests. Where Local Authorities are entrusted with making that legislation effective co-operation between central and local government is essential. This approach often leads to wider involvement as Macdonagh points out that a system of control at central level developed strong bureaucratic tendencies in its efforts to obtain change but also established a dynamic creative and expert concept of administration whereby the solving of each problem generated a further process of regulation, professionalism and expertise [8]. This resulted in Local Authorities being given responsibilities to remove slum building, to provide suitable housing for the working classes and develop town planning, encouraged by the Garden City Movement, all of which promoted a wider approach to solving the housing problem. Local Authorities by their very nature are insular and frequently resolve their problems without regard to an overall or national approach. Consequently the matter of problem solving is bound to attract Government interference resulting in dominance and direction.

It is not denied that control over the construction of building involves important local issues, but its national importance had long been established by the work of the early Victorian sanitary reformers. This had not been over looked by Central Government and was finally established with the introduction of the Public Health Act 1936. This Act, as we have seen, brought about a national system by removing local discretion with the introduction of the Ministerial powers.

Regulation

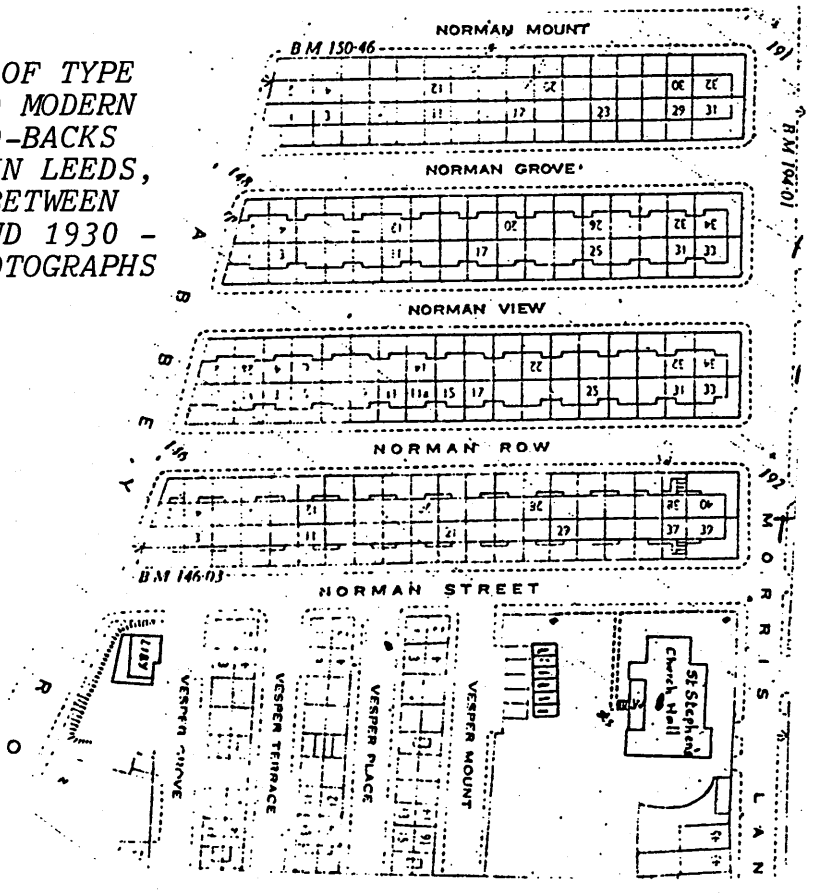
Local Acts epitomized the independence of local government but these Acts have been shown to be extremely cumbersome in controlling building. They are specific and inflexible and continually need amending legislation to incorporate changes in building technology. This early attempt at building control entirely by an Act, although commendable, was not altogether satisfactory. The constant need to update technical regulations or byelaws to the ever changing building technology meant that a flexible system was needed. This was recognised to some extent by the introduction of building byelaws which enabled change of the technical requirement without changing the Act. The byelaw system was by far the better system as many Local Authorities discovered whilst those who maintained local Acts or a combination of the two were severely criticized for doing so. The reluctance by many Local Authorities to adopt the L.G.B. prepared model byelaws was because those byelaws did not take account of local materials and constructional methods, such as cob, timber, thatch and ash although in the main model byelaws were based on acceptable traditional building practices[9]. Harper states that building regulations, and in this context he includes byelaws, have to reflect the general building practice of the time, they cannot be ahead of it nor must they retain the worst practices of the jerry builder [10]. Whilst this is correct it meant that the restrictive nature of control produced no great innovations in house building[11] other than the growing trend of installing W.C.s, bathrooms and better equipped kitchens. Low cost construction maintained this approach which received its fair share of criticism which was not often justified. Byelaws were accused of making houses deeper than they were wide [12] but this was due entirely to the speculative developer seeking to increase the density of

houses per acre and this could not be achieved by planning a wide house. Another dislike of byelaw housing was that it was alleged to produce poor aesthetics and repetitive design[13]. Byelaws did not control aesthetics only structure and amenities. The speculative builder would refrain from using ornate architectural features and produce a simple repetitive design enabling him to reduce expense by standardising components and construction. Street byelaws, often administered as part of the building byelaws simply required streets to be of a certain width and it was again the speculative builder who was responsible for the layout of large estates in a grid pattern of streets producing blocks and rows of houses ideal to attain the maximum density possible (see fig. 18). Examples of this monotonous form of housing can still be seen in Leeds where hundreds of back-to-back houses still exist. This type of development produced cheap housing and maximised the builder's profits. Nevertheless certain byelaws had a significant effect on the pattern and type of building, especially houses This has been shown in the breakdown of court and back-to-back house types producing a more spacious layout, window size and location, removal of communal toilet blocks and the construction of roofs and separating walls. These points are more noticeable where model byelaws were not adopted as can be seen with the single-storey terraced cottages in Sunderland and back-to-back housing in Leeds emphasising the impact of vested interest. These house types nevertheless provided a minimal degree of shelter often better than the tenants previously enjoyed although the "through house" represented a major advance in open space and amenity. House types reflect the economic influence of the time and area but byelaws did enable an improvement in the standards of design and construction which prevented the continuance of slum building which would otherwise become a drain on the economic resources of

future generations.

Despite these small changes to house type and spatial layouts, byelaws were not designed to control the pattern of development. Consequently this eased the introduction of town planning control due mainly to the efforts of Howard, Unwin and others in the Garden City Movement in demonstrating that good housing need not be visually distasteful. It was not so significant in reducing the resistance to control as suggested by Harper[15]. However byelaw housing was not all bad. It generally produced a structure that accommodated improvements and alterations to domestic social patterns which were enjoyed by the occupants. The higher standards required by the byelaws, although socially desirable, did reduce the supply of houses simply by adding to the cost. Furthermore, the housing problem was increased by the demolition of slum buildings[15] but the solution is not to build more slums; a better standard of housing is a social necessity and byelaws helped in this respect. Housing costs increased simply by the builder incorporating improvements of his choice to aid the sale of the property[16] also taxes played an important part lowering profits and forcing lower standards. In 1850 taxes were 30% of the cost of a house[17] which if reduced would have encouraged better housing, less objection to legislative control and reasonable profits. Efficiency of working also had an effect on cost and profit a point not fully appreciated by builders as waste material can often be 100% more than originally estimated[18]. This is frequently aggravated by skimping in times of economic depression in order to keep prices down as house building for the working classes is generally the least profitable of all house building[19]. It was at these times that byelaws were at their most effective by maintaining minimum standards provided they were

LAYOUT OF TYPE III AND MODERN BACK-TO-BACKS BUILT IN LEEDS, BUILT BETWEEN 1910 AND 1930 - SEE PHOTOGRAPHS



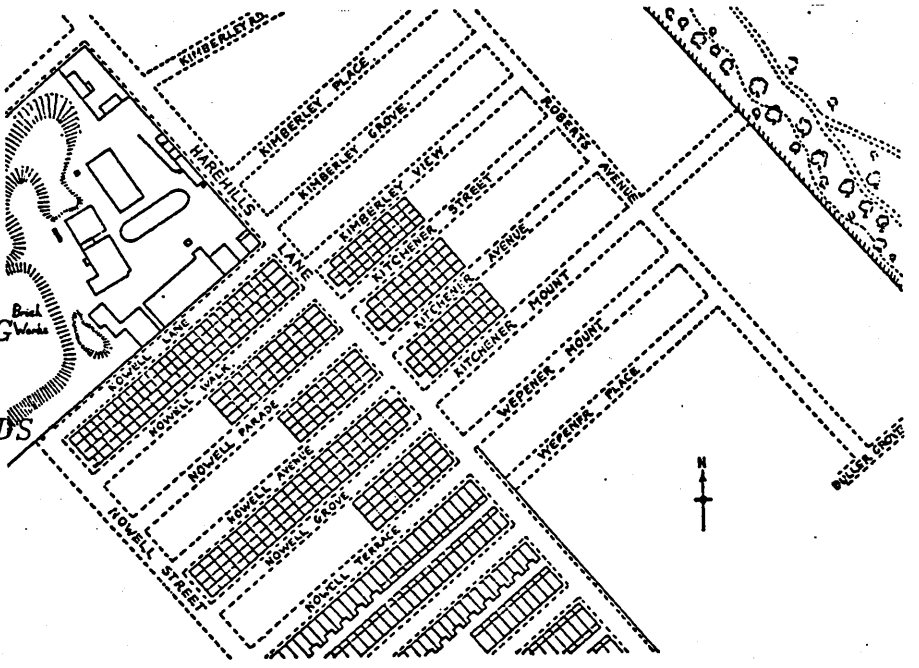
TYPE 3

MODERN

MODERN

TYPE 3

LAYOUT OF BACK-TO-BACK HOUSING IN THE HARE HILLS DISTRICT OF LEEDS



Early twentieth-century street development of back-to-backs in NE Leeds.

SOURCE : CHAPMAN - HISTORY OF WORKING CLASS HOUSING - P.120

properly enforced. Consequently it was not surprising that political lobbying against byelaws, or any political incentive that increased the cost of building, would occur at a time when builders wanted to lower costs.

Byelaws by their very nature were negative, not only restricting bad construction but often restricting innovation and by not updating did not keep abreast of technical development which means that they should be linked to a continuing programme of research and testing[20]. Many byelaws became out of date. This was particularly clear with the development and use of steel framework, concrete, reinforced concrete, cavity wall masonry, fire resisting separating walls and water closets.The dilatory way in which regulations in London and byelaws in England and Wales were introduced or amended to provide a controlling standard on these technological innovations only emphasised the need for a more scientific approach to the development of a flexible yet up-to-date byelaw. The establishment of the Building Research Station and the British Standards Institute would take the making of byelaws from its Victorian base of traditionalism into the scientific approach of the 20th century. This would enable technological assessment and encourage innovation in the development of new materials and methods knowing that progress would not be restricted by traditionalism but by scientific investigation.

However, byelaws, being legally enforceable have to be structured correctly and be within the scope of the Acts, clear in meaning, within normal competence of the building industry, within standards achievable without excessive cost and fitted to the chosen method of enforcement[21]. Examples have been given of byelaws not meeting this specification which have caused problems for both builder and Local

Authority alike - so much so that their enforcement had to be suspended. Byelaws were written in specific terms which although they were simple in that they could be readily understood, used precise terms, were self-contained and easily checked for compliance. Nevertheless, they were limited in being fixed by the byelaw and did not take account of the overall design of the house or the developing technology of the building industry [22]. Specific byelaws were not perfect but at least they could be amended and updated in relatively easy manner [23].

Where it is absolutely necessary to ban the use of a material because of its adverse affect on health or safety it is better to be specific, but in the majority of constructional problems considered in this thesis this was not the case, making it much simpler to use a functional or performance standard as a base for the byelaw or regulation[24]. Professor Pite's evidence to the Departmental Committee (see page 162) advocated the functional approach. This evidence, at the time, did not receive the recognition it deserved. The importance of this approach allows some freedom of choice in material and construction provided the aim of the byelaw is met and therefore does not unduly hinder the development of house design or building technology.

Pite's views, as we have seen, were later supported by the Building Research Station who equally did not wish to see byelaws restricting the benefits of scientific research. It is not surprising that the more searching mind of the scientist, should produce a more radical solution than that emanating from the engineering or construction professions where the step by step incremental approach is more acceptable [25]. Functional byelaws lack precision causing problems of interpretation and application for both builder and enforcing surveyor who if short of knowledge and skill can emphasise this defect. This type of byelaw

places greater reliance on the designer and can be successful when related to traditional and common forms of construction where there is a recognised broad base for agreement [26]. The acceptance that there was more than one solution to a problem began to appear in byelaw form with the inclusion of "deemed to satisfy" provisions (see page 202) and their wider use and was called for by the Joint Committee considering the Public Health Bill in 1936. (See page 218).

A good byelaw or regulation should be functional, positive and acceptable to traditional, local or scientifically assessed methods. It should be clear in its requirements, capable of interpretation and easily updated. It is not just these matters that make the control of building effective, equally important is the way control is enforced and this lies in the interest and determination of the Local Authorities entrusted with that responsibility.

Enforcement

We have already seen that the lack of enforcement leads to central interference. Evidence submitted to Committee of Enquiry or Royal Commission indicated clearly that byelaw administration in the majority of Local Authorities was weak. This allowed vested interests to dominate[27] and lead to indifferent standards of both the byelaws themselves and their enforcement. The prime fault in the system is the discretionary element given to Local Authorities. Consequently many Local Authorities did not adopt byelaws[28] and many who adopted did not enforce, yet all were acting correctly within the law. It was not until The Public Health Act of 1936 that the discretion to adopt was removed but discretion in the mode of administration and enforcement remained. This weakness was the basis of much frustration and aggravation in the operation of the byelaws [29]. In any case many Local Authorities

found difficulty in administrating the law.

Specific byelaws did not require a high level of knowledge and skill to enforce and this enabled Local Authorities to appoint local builders and tradesmen as Building Inspectors. Some retained other financial interests in the trade, others easily worked "hand in glove" with builders[30] and bribery was often alleged[31]. Many Improvement Act Surveyors could be dismissed if found inefficient and they were likely to be politically subordinate to retain their yearly appointment. This often permitted vested interests to control the controllers and it is reflected in a lowering of building and enforcement standards. Not all of these situations existed in every Local Authority but criticism of local administration over the years indicated that a professional approach was severely lacking. Outside London, qualifications for enforcement surveyors was not considered necessary. This attitude became ingrained and when applied alongside limited spending had an adverse effect on the quality of staff recruited. To be effective byelaws have to be enforced in a reasonable but strict manner[32], and this should be done from a position that is not subject to the day-to-day political influences of vested interests but should be carried out preferably by adequately qualified and experienced professionals[33] with a renumeration sufficient to offset any suggestion of bribery or influences. Unfortunately the London system remained outside the incremental development of the England and Wales system but much could have been learnt from the development of the District Surveyor in the role of administrator of the London Building Acts, the opportunity to establish such an officer, within the Local Government Act of 1933 or the Public Health Act of 1936, was not taken. The professional approach was denied at local level but grew at central level, mainly in an

administrative rather than in a technical capacity, identifying social problems and suggesting professional solutions often resulting in legislation expanding control into other areas of social influences. The growth of the professional bodies furthered this trend encouraged by structured research and development, even house builders started to throw away the "jerry builders" image by creating the National House Building Registration Council (N.H.B.R.C.) which has grown into a respected organisation encouraging good standards and providing a warranty against building defects[34]. This progresses towards an opinion that enforcement should be by a process integral with the construction process[35] but the professional approach was not sufficiently developed for that form of control to have been considered seriously in 1936.

Summary

The aims of the building byelaws system introduced by Central Government was to produce the "sanitary house", a building having sanitary accommodation, drainage, ventilation, open space, daylight, sunlight, walls that gave stability, durability and insulation. These buildings were capable of remaining structural units able to accommodate further improvement extending their useful life thus allowing monies to be invested elsewhere in the local economy. The first important issue is the development of a good working byelaw that achieves its aim yet permits a tolerance of freedom or flexibility without such a substantial increase in cost as to financially prohibit achieving the aim. It is noted that controlled building brought about an improvement in housing[36], and the development of the "sanitary house" by means ofbuilding byelaws contributed to the gradual but significant improvement in the housing and health of the working classes[37]. By the turn of the 19th century the housing problem was contained within the substandard

housing and the motivation to build below byelaw standard had been substantially removed[38]. The aim of an improvement in the standard of health was partly achieved by building better houses, as could be noted in the falling urban death rates[39] but the problem of improving the slum houses erected prior to byelaw control remained[40] Despite the opposition to building byelaws they generally achieved their aim not always eradicating bad building but certainly reducing the scope for it[41], and where byelaws were correctly enforced they ensured that houses were adequately built and healthy to live in [42].

One aspect that clearly emerges is the need for housing that offers an acceptable degree of protection in respect of health and safety yet on the other hand ensures that the cost of the building does not exceed an acceptable amount when related to construction, rent and profit [42]. This fine balance is frequently thrown out by national economic trends such as booms and depressions to which the building industry is so vulnerable. Where money has been freely available many excellent buildings have been constructed but where this does not happen buildings can become a hazard to health and safety of its occupants and the area of low cost housing is where this trend is most common.

Tremendous inroads had to be made to change the type and construction of buildings from local traditional types to the planned approach. This required consideration being given to town layout, infrastructure as well as the buildings themselves, all within an economic plan. Consequently, many prejudices were uncovered which resulted in obstruction to the development of common and acceptable building standards. Building controls have to be finely tuned, able to respond to both changes in technology and the needs of society. To meet this need legislation has to be national and mandatory thus forcing the

enforcing Authority to respond by implementing the law. Local discretion, especially of a political nature, is undesirable as the main issues have been resolved by Parliament.

Local discretion is not so objectionable when considering the acceptance or otherwise of plans or construction work in meeting the byelaws or regulation requirement. These requirements should be flexible,capable of being changed quickly when needed and adaptable to the widest range of technical solutions. Functional or performance-based byelaws are the better type to use; specific byelaws should be avoided and only used if it is absolutely necessary to ban a hazardous material. All required standards should be capable of being met within known and recognised building methods which will take account of traditional as well as scientifically assessed methods. Requirements are to be clear, easily understood and capable of application. Where byelaws meet this criteria the enforcement is that much easier. There is less likelihood of mis-interpretation leading to disputes between designer, construction and enforcer. To ensure that the flexibility of the system is used to the best advantage to all concerned the enforcing authority, being the Local Authority need to employ staff of a professional standard equal to that of the designer or manager of the construction. It is only through efficient and effective enforcement that the public benefits of controlled building really emerge. When the factors are out of balance, frustration, argument, indifference and unnecessary expense creep in to generate another incremental adjustment in an attempt to maintain stability. It is alleged that an industry free of constraints would be able to meet the demand for houses[43]. Meeting demand is one aspect but producing a building that is less prejudicial to health and safety is another. The consequences of such an approach results in statutory

intervention to restore the balance, a balance that on reflection is worth the costs involved.

Many examples have been given in the previous chapters where this balance has been tilted by the the action or inaction of Local Authorities. Much of the blame and criticism of inept administration so forcefully expressed in evidence to Inquiries referred to in this thesis, must be placed squarely on their shoulders. The mere fact that by 1936 sixty Local Authorities had not adopted a single Building Byelaw, and many of those that did neither had the desire, nor the means, to enforce, justifies that criticism.

But within the framework of the law these actions were permitted as an exercise of discretionary powers. The Government, quite rightly, checked the abuse of these powers as credibility had to be established within the system of building control. This they did by introducing the Public Health Act 1936 which, although a major piece of legislation, was just another incremental step in maintaining the balance. What was needed was a firmer approach by Government which would remove the discretionary powers of Local Government and introduce a statutory duty to enforce and consolidate the law within the framework of a Building Act.

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(31) op cit (as 13 above) p.154.

(32) op cit (as 6 above) p.226.

(33) NAGARAJAN R. STANDARD ON BUILDING, London, 1976, p.126.

and

op cit (as 1 above) p. 139 - in which Garnham-Wright argues that the enforcer (inspector) must be as well qualified and experienced as the designer and manager of the contruction.

(34) The better quality House Builders formed the National House Builders Registration Council in 1937, a voluntary body open to all builders, who built to standards additional to the byelaws as prescribed by the Council. Confident in their ability to produce good houses registered house builders would give a two year warranty to repair defects. In the first year over a thousand buiders registered and used the two year warranty as part of their market approach.

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APPENDIX 1

The Appendix does not contain the complete text but does provide a brief resume of the requirements.

THE CITY OF BRISTOL BUILDING ACT OF 1788 - GEO III CAP LXVI

SECTION	REQUIREMENT
1.	Regulations for building external walls. This required that all new walls should be built perpendicular. This would avoid the construction of external walls where the upper storeys oversailed the lower storeys thus reducing the distance between buildings across narrow streets at upper floor levels.
2.	No bow window to be built or extended beyond a line of street, except for projections for decoration. This did not apply to the replacement of bow windows.
3.	Regulating the building of party walls, the regulation required that walls built of stone should be 2ft. thick in stone and 18" thick in brickwork to the ground floor, 21" thick stone and 14" brickwork at first floor and requiring a 12" projection above rake of roof and gutter.
4.	For regulating the building of chimneys, this required 9" of non-combustible material between chimneys built back-to-back and $4\frac{1}{2}$" of non-combustible material at the back of other chimneys.
5.	Directions concering jambs and chimneys; a requirement of

the size and the extent of chimney press.

6. A requirement controlling the construction of recesses and chases in party walls.

7. Regulations of party walls between intermixed properties.

8. Owners may be compelled to join in building party walls.

9. Builders to be paid part of the expense according to the verdict. The verdict being related to the appointed surveyors in compelling owners to construct party walls.

10. Court may fine the sheriff making default also any witness making default in any hearings brought before the court.

11. Old party walls and party arches when decayed shall be rebuilt.

12. Owners of houses to give 3 months' notice in writing before pulling down old party walls.

13. Owners of houses having partitions of wood may give 3 months' notice to owners of adjoining houses of their design to pull down the frame.

14. Buildings not having distinct side walls in the manner of building party walls described.

15. How owners are to be reimbursed part of their expense and in what proportions who have built said partitions or party walls.

16. Penalty upon master builders etc., acting contrary to the directions of the Act.

17. Further penalty for suffering the irregularities to continue.

18. Penalty on the workmen or servants.

19. The mayor, alderman and common council to appoint surveyor

being a discreet person skilled in the art of building as the council may think fit. This appointment was a yearly appointment renewable every year. The surveyors were required to take an oath, this oath being (i) one of the surveyors appointed in pursuance of an Act of Parliament passed in the 28th of King George III for regulating buildings and party walls within the City of Bristol and the liberties thereof do swear that upon receiving notice if a building or wall to be built or other builders work done in the district under my inspection, not being by illness or otherwise lawfully prevented, I will diligently and faithfully survey the same, and to the upmost of my abilities endeavour to cause the rules, directions, and restrictions in the said Act prescribed, to be strictly observed, and that without favour, or affection, prejudice or malicious. So help me God.

20. Surveyors may be displaced.

21. Rate or classes of building. This section classified four rates as follow:

i) every house or building not exceeding 9 squares and 30 feet high.

ii) every house or building between 5 and 9 squares and 22-30 feet high.

iii) between 3 and 5 squares and 13-22 feet high.

iv) not exceeding 2 squares and 13 feet high. (A square is 100 square feet).

22. Owners to apply to magistrates in case they shall think themselves

aggrieved by the surveyors' measurements.

23. Detached offices deemed of the same rates as any other building.

24. That master workmen shall give notice of building works to surveyor and fees to surveyor.

25. Penalty on persons who shall begin any building without giving notice to the surveyor, or neglecting to give notice to the surveyor, or refusing admission to inspect and irregular buildings to be pulled down.

26. If workmen do not observe the rules of the Act surveyor to give notices to the justices.

27. Surveyor to survey and make affidavit of houses being built in conformity with the Act.

28. Funnels for conveying smoke not to be put on the outside of houses.

29. Penalty for surveyor neglecting his duty. Maximum £10 fine.

30. Power to hear and determine offences. This section provided that at least two justices of the peace was the minimum to determine offences.

31. Penalty of witnesses refusing or neglecting to attend mayor or justices.

32. Directing the manner of serving notices.

33. For ascertaining and recovering costs.

34. Application of penalties.

35. Inhabitants may be witnesses.

36. The form of conviction.

37. Persons agreed may appeal to quarter sessions.

38. Limitation of actions.

39. Public Acts.

APPENDIX 2

This Appendix does not contain the complete text but provides a brief resume of the requirements.

THE BRISTOL BUILDING ACT 1840. (VICT 3 CAP LXXVII)

An Act for regulating buildings and party walls within the City and County of Bristol and for widening and improving of streets within the same.

SECTION	REQUIREMENT
1.	Previous Act repealed.
2.	Contracts etc. to continue notwithstanding Act repealed.
3.	Monies due under former Act may be recovered under this Act.
4.	Officers under former Act to account (re books, documents, papers and other effects).
5.	Present officers to continue in office until removed.
6.	Act to be put in execution by Mayor, Alderman and Burgesses or by the Council.
7.	An Improvement Committee may be appointed (17 or more persons).
8.	Construction of terms.
9.	Proceedings to be minuted.
10.	Officers to be appointed (as the Council may think proper, and fix salaries, wages and allowances).
11.	Such person not to be clerk or treasurer.

12. Penalty on officers for taking any fee or reward except as prescribed by the Act.

13. Officers to account.

14. Buildings within City to be divided into classes as per second schedule.

15. Rules as to rates of buildings to be affixed as additions to any existing building.

16. Surveyors to be appointed and districts assigned to them (as the Council think proper). Surveyor to make declaration.

17. Fees to be paid to Surveyor (by builder, tradesman, owner or any person causing building or alteration work).

	Fees	
	New Building	Alterations
First Class	£3.03s	£1.11s.6d
Second Class	£2.10s	£1.05s
Third Class	£2.02s	£1.11s
Fourth Class	£1.10s	£0.15s
Fifth Class	£1.20s	£0.10s

Non-payment of fees to be reported by Surveyors and summons may be issued by any two Justice of the Peace, penalty may be imposed for non-payment of fee.

18. Notice to be given to Surveyor of the intention to build, alter or work on any party or partition wall.

19. Penalty for not giving notice of intention to build or repair.

20. External walls to be carried up perpendicular or as the Surveyor may determine. Appeal to the Justices may be made against the determination of the Surveyor.

21. Compensation to be made for building thrown back.

22. No projection to be erected except in certain cases.

23. External walls to be constructed of bricks or stone (except lintels, joist ends, internal plates, all of which to be at least $4\frac{1}{2}$" from the face of the wall).

24. Party and separate side walls to be constructed of certain materials (fire resisting, $4\frac{1}{2}$" either side of wall).

25. No cutting to be made in the rough party walls except for communication or for tying in adjoining building or erecting steps etc.

26. If party wall is defective one owner may give notice to the other requiring an arbitration of two Surveyors and in case of default may appoint a Surveyor.

27. Mode of building party walls and separate walls.

28. How owners, who have built partitions or party walls, are to be reimbursed part of their expense and in what proportion. Rates for building party walls.

29. When building erected over a public way or divided into separate tenements party arches or party walls to be erected.

30. Owner of party wall may raise the same under certain restrictions. Adjoining chimneys and flues to be raised.

31. Backs of chimneys to be pargetted with mortar and openings and hearth stones to be clear of timber.

32. If building now standing shall hereafter be built under regulation of this Act.

33. Gutter may be made to carry off water discharged on the proposed site of a building.

34. Houses to be roofed but not with boards or thatched (slates, tiles, copper, lead, or other incombustible material).

35. Funnel for conveying smoke not to be erected next to any road or nearer to any timber than 14".

36. Names of streets and numbers of houses to be put up.

37. Penalty for erecting buildings contrary to the directions of the Act. Further penalties for suffering irregularities to continue (sum not exceeding £20).

38. Penalty on Surveyor for neglect of duty (£20 maximum).

Sections 39-75 relate to street widening, improving, compensation, purchase of houses and lands.

76. Nuisances by persons in public streets.

77. Prohibition of other nuisances.

Sections 78-97 relate to monies, Mayoral duties and administration.

The second schedule of the Act defined the class of buildings as follows: First Class : Chapel or place of workship, brewery, distillery, manufacturing of whatever height or extent of frontage, or every dwelling or other building exceeding 44 feet high or 27 foot frontage.

Second Class : Every dwelling or building including walls, fences, etc. not exceeding 44 feet high or 27 foot frontage.

Third Class : As Second Class not exceeding 36 feet high and not exceeding 21 foot frontage.

Fourth Class : As above not exceeding 32 feet high and 15 foot frontage.

Fifth Class : Not exceeding 15 feet high and any frontage.

The schedule gave thickness of external walls and party walls and backs of flues, chimney backs in party walls and external walls for example, in a third class building external and party walls were required to be 1½ brick thick in cellar and first floor and 1 brick thick for the rest, whilst if constructed of stone the thickness would be 1'10" and 1'6" respectfully. The backs of flues etc. were required to be 1 brick thick. The schedule described the footings required to the base of the wall on First and Second Class buildings and a 5" projection on the remaining classes, apart from internal walls where the projection may be 4½".

APPENDIX 3

This Appendix does not contain the complete text but provides a brief resume of the requirements.

THE LIVERPOOL IMPROVEMENT/BUILDING ACT 1825 - 6.GEO IX CAP LXXV

SECTION	REQUIREMENT
1.	Future buildings erected or altered according to regulations.
2.	Every building contrary to be declared a common nuisance.
3.	Buildings deemed nuisances to be taken down by order of Justices and material sold to defray expenses.
4.	Court of Quarter Session to appoint surveyors skilled in the art of buildings (these Surveyors would not be Surveyors of the Corporation of Liverpool). The Surveyors appointed to take an Oath of True and Impartial Execution of Office. The Oath to read: (i) being one of the Surveyors of buildings appointed in pursuance of an Act of Parliament passed in the sixth year of the reign of King George IV entitled an Act for the Better Regulation of Buildings in the Town of Liverpool, do swear I shall diligently, impartially and faithfully execute the said Office of Surveyor of Buildings and to the utmost of my abilities caused the provisions and regulations in the said Act to be strictly observed and without favour, affection, prejudice and malicious to any person or persons. So help me God.

5. Notice of building to be given to Surveyor of district.

6. No notice if only door or window opening.

7. In case of Surveyor of district cannot attend the Surveyor or another district may do so.

8. Salary of Surveyors, to be paid by Mayor and Bayliffs and Burgesses of Town of Liverpool such some as the Justice of the Peace of the Quarter Sessions may think so.

9. Penalty on persons neglecting to give notice of building or alterations or refusing inspection £20.

10. Surveyor to give information on buildings or acts constructed contrary to the Act. A Notice may be issued as a result of two Justices declaring a common nuisance

11. Persons inadvertently making default in conforming with Regulations, no action taken where Surveyor had not given notice to the Justices within 10 days of default, provided that default does not affect the safety of the building.

12. Penalties on workman.

13. Buildings or alterations to be surveyed within 14 days of completion. Surveyor to make oath of satisfactory completion to the Mayor or Justice of the Peace.

14. Surveyors neglecting to do their duty could be fined a sum of £20 following of which they would be incapable again of being appointed a Surveyor.

15. No timber to support chimney breast.

16. No projection into street except shop windows of certain dimensions.

17. Openings in external walls to be supported according to direction of Surveyors.

18. Water from buildings to be conveyed to drains. No smoke to be discharged from fronts of buildings.

19. How pipes for conveying water shall be layed.

20. Cellar openings to be covered.

21. Thickness of side walls in case parties canot agree to erect party walls.

22. Party walls becoming decayed.

23. Expenses of party walls.

24. Certain buildings exempted from the operation of the Act (warehouses and other buildings over 18ft. from the street and churches of the Church of England).

APPENDIX 4

This Appendix does not contain the complete text but provides a brief resume of the requirements.

BILL FOR REGULATING BUILDINGS IN LARGE TOWNS - 3RD MAY 1841

SECTION	REQUIREMENT
1.	Bill for the council of every borough which is within the Acts passed for the regulation of Municipal Corporations in England and Wales, Scotland and Ireland, shall within 6 months of passing the Bill appoint Surveyor or Surveyors of buildings to be responsible for a district in the borough and who may have Assistant Surveyors.
2.	Surveyors to make a declaration. "That I will diligently, faithfully and impartially perform the duties of my office to the utmost skill and endeavour to cause the said Act for the regulation of building in the borough to be strictly in a force without fear, favour or mallice towards any person whomsoever".
3.	Council to provide an office for the Surveyor. The cost to be paid by Surveyors out of the fees provided.
4.	Commissioners shall be authorised to act for the borough in Oxford.
5.	Commissioners be authorised to act for the borough in the hamlets of Duddleston and Nechells in the Parish of Aston near Birmingham.

6. Surveyors to be entitled to fees as set out in schedule.

7. Three days before any party wall, outside wall or chimney back of any building is pulled down, built or re-built notice be given to the Surveyor by the builder.

8. Surveyors to act where notice has not been given. Any irregularities to be notified to the Justice of the Peace or in Scotland the Sheriff, who shall cause irregularities to be amended.

9. Where the Surveyor of a district cannot attend a building site, a Surveyor of another district may do so.

10. Surveyor to give notice of any defect to owner/occupier, master builder, workman or any other person employed. Any defects not corrected within 48 hours, notification be given to Justice of Peace, or Sheriff, who shall cause an inquiry into that contravention and if confirmed cause the removal or amendment of the contravention.

11. Buildings and alterations being inspected within one month of completion and a declaration be given stating that the building is in conformity with the Act.

12. Penalty on builder for neglecting to give notice.

13. Penalty on workman offending.

14. Penalty on refusing Surveyor permission to inspect.

15. Houses not be built below the level of the ground without areas, such areas being open and not less than 3ft. wide from the floor of such room to the top of the area adjoining the front or back of the property.

16. Occupation of cellars in houses may be used as a storehouse or warehouse, not to be used for habitation if cellar does not have a window, chimney and open space.

17. Occupation of cellars already built/penalties in respect of contravening Section 16 and 17.

18. Houses not be built back-to-back. Not applicable to corner houses, nor to any buildings in a street which was laid prior to the passing of the Act. Rear space between back-to-back of any other house but not applicable to any back addition or outbuilding belonging to either house, the height of the extension being limited to half height of the wall and not to extend more than 2/3 along the back.

19. Regulation of street widths, 30ft. between houses, 20ft. in the case of alleys and foot passages where there is no carriageway.

20. Houses not to be built in close alleys except mews and stables.

21. Floor levels to be at least 6" above the level of footway or road adjoining such house.

22. Regulating height of rooms in small houses. 8ft. and not less than 7ft. in the other storey.

23. Only one storey may be constructed in the roof of a building.

24. Yards and necessary houses to be provided to small houses. Privy to be properly fenced from public view. Yard to be enclosed. Maximum area covered by out-building one sixth of the yard area.

25. All buildings erected contrary to the Act to be abated. A report submitted to the Justice of the Peace or Sheriff who may authorise the alteration or removal of the offending building.

26. Neglect or evasion of Act.

27. Future buildings in towns not within local building Acts to be according to this Act. Provisions for securing against fire.

28. Buildings to be distinguished as in Schedule A.

29. Rules to the rates of additions to existing buildings.

30. Regulations as to rates as buildings, heights of walls.

31. Regulations as to outer walls. To be built of stone or brick being bonded with a good mortar of one-to-three cement sand mix.

32. Openings in outer walls of shops or warehouses to be supported according to direction of Surveyors. Brick or stone arches, iron cradling, lintels or bressimars over 10ft. span be provided with posts.

33. Mode of building party walls and separate side and end walls. Party wall brick or stone. Any timbers in the wall to be 9" away from other timbers.

34. Party walls to be carried through and above roof as to form a parapet not less than 12" high measured perpendicular from the gutter and right angles from the roof.

35. Thickness at back of flues and chimney openings. No flue nearer than 9" to face of a party wall or 4½" to any other flue or chimney opening. Thickness of back of chimney 1½ brick (13½") in cellars or 8½" in any other case.

36. Timber not to be within 9" of any chimney opening or flue.

37. Construction of chimney openings. Arch of brick or stone or bar of iron over every chimney opening.

38. Ovens and furnaces to have protecting walls. Refers to bakers, smiths or other tradesmen's furnace: wall thicknesses a minimum of 9".

39. Heights of chimney shafts. Not to exceed 6ft. above roof or 22" wide unless built back-to-back. May be in excess of this height if secured with straps approved by Surveyor.

40. Chimneys to be pargetted.

41. The position of flues to be painted on the outer face of buildings adjoining vacant land. The flues to be so painted on buildings adjoining vacant land - painted mark 3" wide on party wall (this was to identify the position of flues in order that any timbers in the adjoining property would not be placed in close proximity to that flue).

42. Houses to be roofed with incombustible material (this did not apply to any woodwork in dormer windows).

43. Roof water not to be allowed to drip into street.

44. Projections from the face of the building (this was not applicable to copings and cornices).

45. Regulations as to raising buildings.

46. Adjoining chimneys and flues to be raised. Buildings raised at greater height than adjoining chimneys of smaller buildings to be raised at the expense of the builder or the extended building. Chimney to be as high as extended building.

47. Regulating the mode of cutting into existing party walls.

48. Openings through party walls. (Secured with iron doors).

49. Notice of cutting through party wall. (Three clear days notice to the Surveyor).

50. Penalty for improper cutting into party walls.

51. Penalty for fraud in erecting party walls.

52. A notice to be given of intention to build old party walls, arches and partitions.

53. Surveyors to be appointed to view party walls, arches and partitions.

54. Form of notice re. party wall and appointment.

55. If walls are certified ruinous by the Surveyor, copy of notice to be delivered to owner within three days.

56. Owners thinking themselves aggrieved may appeal to General Quarter Sessions.

57. Powers of penalties intending to repair or rebuild in default of appeal.

58. Payment of Surveyors of party walls if not condemned.

59. How owners are to be reimbursed of their expense of building party or partition walls.

60. How expenses of party walls shall be formed between land owners and tenants.

61. Persons requiring a wall or a higher rate of building shall build a separate side or end wall.

62. Regulations as to buildings over passages.

63. Such buildings as shall be prescribed as nuisances shall be pulled down.

64. Expenses borne by owner.

65. Persons taking down and repairing buildings shall set up sufficient fence with platform for foot passengers and to be lit at night. Penalty for neglect.

66. If chimneys are ruinous, notice may be given by Surveyor for repair.

67. Occupier may deduct the expenses from his rent.

68. Regulations relasting to fire in sheds.

69. Existing contracts not to be vitiated.

70. Respecting contracts for leases.

71. Recovery of penalties.

72. Persons aggrieved may appeal to Quarter Sessions.

73. Distress not unlawful for want of form.

74. Plaintiff not to recover after tender of amends.

75. Decision of sheriff to be final.

76. Interpretation.

77. The Act may be amended.

APPENDIX 5

This Appendix does not contain the complete text but provides a brief resume of the requirements.

BUILDING REGULATION BILL NO. 2 - BILL NO. 371 27TH MAY 1842

SECTION	REQUIREMENT
1.	Councils to appoint Surveyors.
2.	Declaration by Surveyors.
3.	Surveyors Office to be provided.
4.	Fees.
5.	Oxford Commissioners.
6.	Surveyors under Local Acts to be Surveyors under this Act.
7.	Buildings and additions to be surveyed.
8.	Penalty.
9.	Penalty for refusing inspection.
10.	Houses below ground.
11.	Occupation of cellars.
12.	Occupation of cellars in buildings already built.
13.	Penalty.
14.	Width of streets.
15.	Level of ground floors.
16.	Height of rooms.
17.	Only one storey in a roof.
18.	Yards to be provided.

19. All buildings erected contrary to the Act to be altered.

20. Neglect or evasion of Act.

21. Height of walls.

22. Buildings presented as nuisances may be taken down.

23. Expenses borne by owner.

24. Persons taking down a building shall construct a fence and platform for foot passengers and be lit at night.

25. Ruinous chimneys.

26. Occupier may deduct expenses from rent.

27. Existing contracts not vitiated.

28. Respecting contracts for leases.

29. Receiving of penalties.

30. Persons aggrieved may appeal to Quarter Sessions.

31. Distress not unlawful for want of form.

32. Plaintiff not to recover after Tender of amends.

33. Decision of sheriff final.

34. Interpretation.

35. May may be amended.

Schedule - granting London and Bristol exemption from the Act.

APPENDIX 6

This Appendix does not contain the complete text but provides a brief resume of the requirements.

THE LIVERPOOL BUILDING ACT 1842 (5 VICT CAP XLIV)

SECTION	REQUIREMENT
1.	Repeal of former Act.
2.	Council to appoint a Committee known as Health Committee.
3.	Surveyors appointed to assist Committee.
4.	This section contained rules for regulating widths of streets.
5.	Houses not be built in close courts.
6.	Level of ground floors (6" above footway adjoining).
7.	Regulating size of rooms.
8.	Only one storey in roof.
9.	Regulating windows (every room provided with at least one window 5ft. x 3ft. wide and 3 sq.ft. in attic rooms).
10.	Cellars in courts not to be occupied in dwellings.
11.	Cellars not be to be let as dwellings unless a room height of 7ft.
12.	Penalties.
13.	Owners of house to provide privy and ashpit for same.
14.	Privies to be provided.
15.	Owners of houses to keep privies and ashpits in repair.

16. Owners of courts and passages to keep them flagged and in repair.

17. Private drains, privies, cess pools etc. to be cleaned by occupants.

18. Provisos.

19. Nothing to authorise the Council to act in any public or private sewer without consent of proper authorities.

20. In case any house is filthy and unwholesome in condition magistrates may order same to be cleansed.

21. In case tenants opposing execution of Act.

22. Nuisance bye laws.

23. Nuisance bye laws.

24. Nuisance bye laws.

25. Nuisance bye laws.

26. Graves (2ft. 6in. of soil on top).

27. Fine on Secton for second offence.

28. The vaults.

29. Power to appoint Surveyors.

30. Surveyor to make declaration.

31. Council to provide office for Surveyors.

32. Notice of building or repairing of building to be given to Surveyor.

33. No notice required for construction of door or window.

34. Surveyors to act although notice has not been given.

35. If Surveyor of the district cannot act another may act for him.

36. Surveyor to give information on buildings or alterations constructed in contravention of the Act.

37. Buildings or alterations to be surveyed within one month after finished. Declaration to be made of conformity to the Act.

38. Penalty on builder neglecting to give notice.

39. Penalty on workman offending.

40. Penalty on persons refusing inspection.

41. All buildings erected contrary to this Act to be altered and to comply.

42. Fines for neglect or evasion of the Act.

43. As to persons inadvertantly making default of conforming to regulations.

44. Future buildings to be erected according to this Act.

45. Buildings distinguished as in Schedule A.

46. Rules as to the rates of building be affixed to any existing building.

47. Regulations as to the rates of buildings, heights of walls etc.

48. Definition of an outer wall.

49. Regulations as to outer walls (non-combustible materials bedded in mortar of 1 to 3 cement or lime sand, timbers $4\frac{1}{2}$" from face of wall).

50. Openings in outer walls of shops or warehouses to be supported according to directions of Surveyors (arches, lintels, bressummers).

51. Mode of building party wall and separate side walls (non-combustible materials).

52. Rules as to thickness of party walls.

53. Parapets may be formed.

54. Party walls in third class buildings erected prior to 1834 exempt from this Act.

55. Regulations as to fireplaces and flues (flues 4½" from face of wall, timber not nearer than 9" to a flue).

56. Construction of chimney openings.

57. Ovens and furnaces to have projecting walls.

58. Height of chimney shafts.

59. Chimneys and flues to be pargetted.

60. Flues to be painted externally on the wall which abuts adjoining vacant land.

61. Sizes of joists, purlins, rafters as per Schedule B.

62. Of what material houses shall be roofed (slate, tile, glass, copper, lead, zinc or artificial stone or stucco).

63. Water from buildings to be conveyed to drains.

64. How pipes shall be laid.

65. No smoke or steam to be discharged from front of building.

66. Cellar openings to be secured.

67. Projections in front of buildings.

68. Regulations as to raising buildings.

69. Adjoining chimney and flues to be raised.

70. Regulations for and mode of cutting into party walls.

71. Openings through party walls (how to be made).

72 - 82. Sections relating to party walls.

83. Persons requiring a wall for higher rate of building to build separate end and side walls.

84. Regulations as to buildings over passages.

85. Corporation empowered to fence off or take down such buildings as may be presented as a nuisance.

Sections 86 - 89 hoardings and fences to buildings.

90. Ruinous chimneys.

91. Owner may deduct the expense from his rent if there is no agreement.

92. Fires in sheds.

93 - 131. Relate to streets and administration.

An example of the timber sizes quoted in Schedule B, floor joists; span 7' - 10', 6" depth 2" width or equal area, span 10' - 12', 6" x 2½", span 12' - 14', 7" x 2½". Rafters 6' clear span, 3" x 2", 7½' clear span, 3" x 2½", 9' clear span, 4" x 2½".

APPENDIX 7

This Appendix does not contain the complete text but provides a brief resume of the requirements.

BRISTOL BUILDING ACT 1847 (10 AND 11 VICT CAP CXXIX (2ND JULY 1847))

The powers in this Act would be added to the poweres contained in the Act of 1840.

Section 12 - Certain provisions of 1840 Act repealed, Section 20 - external walls to be carried up perpendicular, Section 21 - appeal made to Justices, Section 22 - no projection erected except in certain cases, Section 26, 27 and 31).

SECTION	REQUIREMENT
13.	Second schedule of 1840 Act repealed.
14.	Schedule B of 1840 Act to be replaced.
15.	Power to reduce fees payable under 1840 Act (Mayor and Town Council can lessen, alter or abolish the fees).
16.	How external walls to be carried up (carried up perendicular - alignment to street improvement line).
17.	When front or external walls are taken down (rebuild perpendicular with alignment to street improvement lines).
18.	When part only of front or external walls pulled down.
19.	Appeals may be made to Justices against determination of Surveyor.

20. Compensation for buildings thrown back.

21. No projection to be erected except in certain cases.

22. For determining the general line for front of houses, owners may remove by windows etc.

23. Water to be drained from copings.

24. What shall be deemed party walls.

25. House divided to have party wall.

26. Rules for defining separate house (separate occupants - entrances and staircases).

27. If party wall defective one owner may give notice to the other requiring arbitration by two Surveyors.

28. If Surveyor does not attend arbitration within 1 hour after the time specified in notice another may be appointed.

29. In case of Surveyors neglect to give notice within 1 month of completion of building work.

30. Surveyors to certify wall has to come down - notice to be given - right of appeal.

31. If no appeal or certificate confirmed party may enter premises.

32. Surveyors not to certify contrary to Act.

33. As to mode of building party walls and separate side walls.

34. Separate wall not to become a party wall.

35. How party walls are to be finished.

36. Party wall may be carried above roof.

37. Walls to be carried up above the roof of adjoining premises.

38. Backs of chimneys to be pargetted with mortar.

39. How backs of chimneys are to be constructed.

40. Rules for prescribing the width of new streets etc.

41. Penalty for erecting contrary to the Act.

42. After convictions premises to be altered.

43. Works not to be commenced without consent (street works).

Sections 44 and 45 relate to administration.

Schedule B gave rules with regards to foundations, flues, chimney stacks, floor areas, thickness of walls and heights of walls.

APPENDIX 8

This Appendix does not contain the complete text but provides a brief resume of the requirements.

STRUCTURE OF BUILDING BYE LAWS MADE UNDER SECTION 34 OF THE LOCAL GOVERNMENT ACT 1858

These bye laws were generally in accordance with the following format:

1. With respect to the structure of walls of new buildings for securing stability in the prevention of fires.
   a) walls of new buildings to be constructed of the thickness specified in the schedule attached and foundations to rest on solid ground or concrete;
   b) external or party walls of new buildings which adjoin any other buildings to be carried up to form a parapet of not less than 6". Thickness of party walls and backs of chimneys;
   c) incombustible materials to be used in construction of roofs, chimneys, fireplaces, etc;
   d) chimneys, fireplaces, etc.
2. With respect to sufficiency of space about new buildings to secure free circulation of air and with respect of ventilation of such buildings.
   a) open space to be provided in the rear or at side of building;

b) open space not be afterwards built upon;

c) windows;

d) ventilation of rooms;

e) ventilation (relating to public buildings).

3. With respect to drainage etc.

a) to provide drains;

b) construction of drains;

c) drains, etc. to be trapped and ventilated;

d) sub-soil drains to be provided where necessary;

e) construction of water closets and privies;

f) no cess pool to be constructed unless where unavoidable and including mode of construction of cess pools;

g) ashpits;

h) buildings unfit for human habitation.

4. As to the giving of notices, etc.

a) notices to be given of intention to erect new buildings and plans and sections to be deposited;

b) Borough Surveyor to inspect works and persons performing works to give notice to the Borough Surveyor before commencement and completion of same;

c) works not executed in conformity with bye laws to be pulled down and layed open on receipt of notice from Surveyor;

d) notice to be given to Surveyor within a month after completion of any works to inspect same;

e) Town Council may pull down any works not executed in accordance with bye laws;

f) penalty;

g) offences by workmen.

APPENDIX 9

BUILDING BYELAWS OF THE BOROUGH OF BARNSTAPLE -

23rd March 1875

MADE UNDER THE PROVISIONS OF THE LOCAL GOVERNMENT ACT 188

Windows.

XIII.—The person erecting any new Building, shall provide every habitable room therein, with at least one Window opening directly upon the external air, and shall cause the total area of glass in such Window or Windows, clear of the sash frame, to be at least one tenth of the area of the floor of such room, and he shall cause the top of one at least of such Windows to be not less than 7½ feet above the floor, and the upper half at least to be made to open the full depth, or in case of casements the full width.

Ventilation of Rooms.

XIV.—The person erecting any new Building, shall cause every habitable room therein without a fire-place to be provided with adequate means of ventilation by air-shaft, or other effective means.

Ventilation.

XV.—The person erecting any new public Building, shall cause such Building to be supplied with proper means of ventilation.

With respect to the Drainage of new Buildings, to Water Closets, Privies, Ashpits, and Cesspools, in connection with such Buildings, and to the closing of such Buildings when unfit for human habitation, and to the prohibition of their use for such habitation.

To provide Drains, &c.

XVI.—The owner of every new House or Building which is without sufficient drainage, shall cause such House or Building to be drained in the most effectual manner which may be practicable, and he shall adopt an appropriate mode of drainage, and use only sound, suitable and substantial materials in the construction of such drainage.

Construction of Drains.

XVII.—The owner of every new House or Building shall cause the drains of such House or Building to be constructed of glazed stoneware or fire-clay Pipes, or other equally suitable material, and to be properly connected with the Sewers in such manner as the Borough Surveyor shall direct. He shall cause such drains to be laid with water-tight joints, and beneath any House or Building, to be imbedded in and surrounded with well puddled clay or concrete. He shall not allow any drain to be carried under any House or Building where it can be possibly avoided. He shall not allow any right angle junction, whether vertical or horizontal, to be formed.

Drains, &c., to be trapped and ventilated.

XVIII.—The owner of every new House or Building, shall cause every inlet to the house drains, and every communication between the rain water Pipes to such House or Building, and the drains or sewers, to be properly trapped direct to the drains, and he shall cause proper ventilation to be provided in the drainage of such House or Building by special pipe or shaft.

Sub-soil Drains to be provided where necessary.

XIX.—The owner of any new House or Building shall cause the drainage of such House or Building to be constructed either with earthenware pipe drains, in addition to those required for the ordinary drainage of such House or Building, or with other suitable appliances, so as to drain the sub-soil of the premises, wherever the dampness of the site appears to render this necessary. And he shall cause all rain water to be so drained or conveyed from the roof of such House or Building, as to prevent its dripping on to the ground, and causing dampness in the walls.

Conveyance of rain water from roof.

Construction of Water Closets and Privies.

XX.—The person constructing any Water Closet or Privy, in connection with any new House or Building,

shall construct such Water Closet or Privy in a suitable situation, with sound, suitable and substantial materials, and of adequate dimensions.

He shall furnish such Water Closet or Privy with an opening as near the top as practicable, communicating directly with the external air, and not opening near any door or window, or shall furnish such Water Closet or Privy with other sufficient means of ventilation.

No Cesspool to be constructed unless where unavoidable.

XXI.—No person shall construct a Cesspool in connection with any new House or Building in any case, except where unavoidable, in that case the person constructing such Cesspool shall construct the same in a suitable situation with sound, suitable and substantial materials, and of adequate dimensions. He shall cause such Cesspool in every case to be made water tight, to be arched or covered over, and a pipe or shaft for ventilation to be carried up from it, or from the drain communicating with it from the Water Closet or Privy.

Mode of constructing Cesspools.

Ash-pits

XXII.—The person constructing any Ashpit in connection with any new House or Building, shall construct such Ashpit in a suitable situation, with sound, suitable and substantial materials, and of sufficient size to contain the ashes and dry refuse likely to accumulate between the times appointed for the removal of such ashes and refuse.

Buildings unfit for human habitation.

XXIII.—In any case where it is certified to the Town Council by the Medical Officer of Health of the Borough, by the Surveyor of the Town Council, by the Inspector of Nuisances, or by any two Medical Practitioners, that any Building or part of a Building erected since the Local Government Act 1858 came into operation within

the Borough is unfit for human habitation, the Town Council may cause a Notice of such Certificate to be served on the owner or occupier of such Building, and appoint a time for him to appear and answer the same before them, and upon such appearance, or in default of such appearance, may by their Order affixed conspicuously on the Building or part of the Building, declare that the same is not fit for human habitation, and direct that it shall not after a date therein to be specified be inhabited, and any person who after the date or time mentioned in such Order, lets or occupies or continues to let or occupy, or knowingly suffers to be occupied such Building or part of a Building, shall be liable for every such offence to a penalty of Twenty Shillings for every day during which the same is so let or occupied. Provided always that if at any time after the making of such Order the Town Council shall be satisfied that such Building or part of a Building has become, or been rendered fit for human habitation, they may revoke their said Order, and the same shall thenceforth cease to operate.

As to the giving of Notices: as to the deposit of Plans and Sections, by persons intending to lay out new Streets or construct new Buildings: as to inspection by the Sanitary Authority, and as to the power of the Sanitary Authority to remove, alter, or pull down any work begun or done in contravention of such Bye Laws.

Notice to be given of intention to form New Street, and Plans and Sections to be deposited.

XXIV.—Every person who shall intend to make or lay out any new Street, whether the same shall be intended to be used as a public way or not, shall give

Maximum height (in 3 floors), 33 feet.

18½ inches brick ground floor, 8½ inches ditto above, 21 inches rubble masonry ground floor, 18 inches and 16 inches above respectively, footings not less than 6 inches wider.

For every additional 10 feet in height: 21 inches of brick and 3 inches of rubble masonry is to be added to the thickness of Basement Walls, or Ground Floor Walls where there is no basement.

The thickness of Walls to be constructed in Concrete, must be equal to that described for Brick: the concrete to be composed of one part of best fresh Cement, two parts of broken stones, stoneware or other hard clean substance, and two parts of clean river Gravel. Walls so constructed must be carried up uniformly with proper frames, and hoop iron bond on each layer.

BYE LAWS.

As to the Removal of Refuse and Cleansing of Pavements, &c.

As to Cleansing Footpaths and Pavements.

I.—Every occupier of any Premises within the Borough shall keep clean and free from filth the Foot way and Pavements adjoining the Premises occupied by him.

As to the Removal of Refuse.

II.—Every occupier of any Premises shall remove or cause to be removed, between the hours of twelve at night and seven in the morning from Lady day to Michaelmas-day, and from eleven at night to eight in the morning between Michaelmas and Lady-day, all the Refuse from such Premises (at least twice in every week), and shall in the meantime provide adequate means of storing the said Refuse, so that it shall not become a nuisance to the occupants of the premises on which it arises, or to the other inhabitants of the Borough.

In certain cases Council may allow a reduction in width of new Streets.

II.—In any case in which an open space shall be left along one or both sides of any new Street throughout its whole length in front of the Houses, or in which any new Street shall not be the principal or only approach to Dwelling Houses, the Town Council may allow of a reduction of the width herein specified for such Street, whether a Carriage Road or not, as they shall see fit.

Measure of width of new Street.

The width of any new Street shall be taken to mean the whole space dedicated to the public, exclusive of any steps or projections therein, and measuring at right angles to the course or direction of such Street.

No building to be erected which shall exceed by more than 5 feet the width of the Street.

III.—No person shall erect any new Building on the side of any new Street which shall exceed in height by more than 5 feet, the distance from the front of such Building to the opposite side of such Street; nor shall any person at any time subsequently increase the height of such Building, so as to exceed the height aforesaid.

Mode of estimating height of New Building.

In estimating the height of any new Building, the measurement shall be taken from the level of the centre of the Street immediately opposite the Building, up to the parapet or eaves of the roof.

After approval of level of new Street, Surveyor to supply specifications for drainage.

IV.—When the proposed level of any new Street shall have been approved by the Town Council, their Surveyor shall specify the depth and inclination, form, size, materials and other particulars of the Sewers and other appurtenances according to which the works for the proper drainage of such Street and of the adjoining properties shall be carried out, and no person shall carry out any works for the proper drainage of such Street and of the adjoining properties otherwise than in accordance with such Specification.

Appropriate mode of construction to be adopted for new Streets.

V.—Any person who lays out any new Street shall adopt an appropriate mode of construction of such Street, including Footways, Curbs and Gutters, and shall use only sound, suitable and substantial materials in the construction of such Street.

With respect to the structure of the Walls of new Buildings, for securing stability and the prevention of Fires.

Walls of new Buildings to be constructed of the thickness specified in Schedule, and foundations to rest on solid ground or concrete.

VI.—The person erecting any new Building, shall cause the Walls of such Building to be constructed of such thickness as is specified in the Schedule appended to these Bye Laws, and shall cause the foundation to rest on solid ground, or upon concrete, or upon other solid substructure.

External or party Walls of new Buildings which adjoin any other Buildings, to be carried up to form a parapet of not less than six inches. Thickness of Party Walls and Heads of Chimneys.

VII.—The person erecting any new Building, the roof or gutter of which shall adjoin any other House or Building, shall cause every external or party Wall of such Building to be carried up above such roof or gutter, to form a parapet of not less than 6 inches in height, measured at right angles to the slope, and above the covering of such roof, or above the highest part of such gutter, and he shall construct such party Wall and the back of any Chimney in connection with any Wall of such Building, of not less than 9 inches in thickness in brick, or 6 inches in concrete.

Incombustible Materials to be used in construction of Roofs, &c.

VIII.—The person erecting any new Building, shall cause the roof, the gutters, the exterior of the dormers,

Chimneys, Flues, &c.

(except the doors and windows of such dormers,) the chimneys, flues and fire-places in connection with any Wall of such Building, and the hearths in connection with such fire-places, to be formed of incombustible materials. He shall not allow any Timber or woodwork (except a Brassummer cornice, story post, door and window and their frames,) to be brought to within 4½ inches of the outer surface of any external or party wall.

Chimneys, Flues, &c.

IX.—No person erecting any new building, shall allow any Timber or woodwork to be brought to within 9 inches of the internal surface of any Chimney or flue in connection with any wall of such building or fire-place. He shall not allow any opening to be made in any such Chimney or flue for any purpose, nor any pipe to be fixed in any Wall of such new Building for conveying smoke, heated air, and steam or hot water. He shall cause the breast of every Chimney in connection with any wall of such Building, the front widths and partitions to be at least 4½ inches in thickness, and the flues to be well pargetted.

X.—The following Buildings and works shall be exempt from the operations of these Bye Laws.

Common Gaols, Prisons, Houses of Correction, and places of confinement connected therewith under the Inspection of the Inspectors of Prisons, Lunatic Asylums, Session Houses and other public Buildings belonging to or occupied by the Justices of the Peace of the Borough. Buildings belonging to any Canal, Dock or Railway Company, and used for the purpose of such Canal, Dock or Railway under the provisions of any Act of Parliament.

With respect to the sufficiency of the space about New Buildings to secure a free circulation of air, and with respect to the ventilation of such Buildings.

Open space to be provided in the rear of or at side of Building.

XI.—The person erecting any new Building to be used as a Dwelling House, shall provide in the rear or at the side thereof, an open space, exclusively belonging thereto to the extent at least of 150 Square feet, free from any erection thereon above the level of the ground. And he shall cause the distance across such open space between every such Building and the opposite property at the rear or side, to be 10 feet at least. If such Building be of two stories in height above the level of such open space, he shall cause the distance across to be 15 feet. If such Building be of 3 stories in height, he shall cause such distance across to be 20 feet. If such Building be of more than 3 stories in height, he shall cause such distance across to be 25 feet. When however thorough ventilation of such open space is secured, or when on the rebuilding of the Houses within the Borough these dimensions cannot be adhered to without considerable sacrifice of property, they may be modified in Special cases at the discretion of the Town Council.

Open space not to be afterwards built upon.

XII.—Wherever any open space has been left belonging to any Building to which these Bye Laws apply, no person shall afterwards build on such open space without the approval of the Town Council, provided that this prohibition shall not apply to any house or semi-detached House, any portion of which is distant 60 feet or upwards from the nearest Dwelling House, unless the proposed alteration in such House or semi-detached House, would involve any interference with the existing drainage of the premises.

Notice to the Town Council of such intention by writing delivered to them at their office, or at the office of the Borough Surveyor, and shall at the same time leave or cause to be left at the Office of the Town Council, or of the Borough Surveyor, a Plan and Section of such intended new Street, drawn to a scale of not less than 40 feet to every inch, and such person shall show on such Plan, the names of the owners of the Land through or over which such Street shall be intended to pass; the level, width, direction, the proposed mode of construction, the proposed name of such intended new Street, and its position relatively to the Streets nearest thereto: the size and number of the intended Building Lots, and the proposed sites, height, class, and nature of the Buildings to be erected thereon, and the proposed height of the division and fence Walls thereon, and the name and address of the person intending to lay out such new Street, and he shall himself sign such Plan or cause the same to be signed by his duly authorized Agent.

He shall show on every such Section the level of the present surface of the ground above some known fixed datum, the level and rate or rates of inclination of the intended new Street, the level and inclination of the Streets with which it will be connected, and the level of the lowest floors of the intended new Buildings.

Notice to be given of intention to erect new Buildings and Plans and sections to be deposited.

XXV.—Every person who shall intend to erect any new Building or Buildings, shall give notice to the Town Council of such intention, by writing delivered to them at their office, or at the office of the Borough Surveyor, and shall at the same time leave, or cause to be left at the office of the Town Council, or of the Borough Surveyor, a detail plan and section of every

floor of such intended new Building drawn on a scale of not less than 8 feet to every inch, showing the position, form, and dimensions of the several parts of such Buildings, and of the Water Closet, Privy, Cesspool, Ashpit, Well, and all other appurtenances, and together with such plan and section he shall leave or cause to be left at the office of the Town Council, or of the Borough Surveyor, a description of the materials of which the Building is proposed to be constructed, of the intended mode of drainage and means of water supply.

He shall at the same time leave or cause to be left at such office, a block plan drawn to a scale of not less than 16 feet to every inch, showing the position of the Buildings and Appurtenances of the properties immediately adjoining, the width and level of the Street, the level of the lowest floor of the intended Building, and of the yard or ground belonging thereto.

He shall also show on such plan the proposed lines of house drainage, and their size, depth, and inclination.

Borough Surveyor to inspect works.

XXVI.—The Borough Surveyor shall inspect any Work or Building in progress of construction at any reasonable time when he may think fit, or when he may be required to do so by the Town Council, but the person laying out the work, or the builder shall give notice in writing to the Borough Surveyor before the commencement of such work, and before any foundations of a new Building, or any Sewer or Drain are covered up, and shall give the like notice after the works have been completed, which may have been required by the Surveyor to be done in amendment of any irregularity, and before such works shall be covered up.

Persons performing works to give notice to the Borough Surveyor before commencement and completion of same.

Works not executed in conformity with Bye Laws to be pulled down and laid open on receipt of notice from Surveyor.

XXVII.—If in doing any work or erecting any Building, anything is done contrary to the Bye Laws, or anything required by the Bye Laws is omitted to be done; or if the Borough Surveyor on surveying or inspecting any Building or Work finds that the same is so far advanced that he cannot ascertain whether anything has been done contrary to the Bye Laws, or whether anything required by such Bye Laws has been omitted to be done; the Surveyor shall within 24 hours after such survey or inspection, give to the builder or person engaged in erecting such Building, or in doing such work, notice in writing, requiring such builder or person within forty-eight hours from the date of such notice to cause anything done contrary to the Bye Laws, to be amended, or to do anything required to be done by such Bye Laws, but which has been omitted to be done; or to cause so much of any Building or work as prevents such Surveyor from ascertaining whether anything has been done, or omitted to be done as aforesaid, to be to a sufficient extent cut into, laid open, or pulled down, and such builder or other person shall forthwith comply with the notice so given, unless he can show that he has duly observed the Bye Laws in force.

Notice to be given to Surveyor within a Month after completion of any works to inspect same.

XXVIII.—Within one month after any work or Building, of which Notice was given, has been completed, the Builder or person by whom such work has been done, shall give Notice thereof to the Borough Surveyor, and the Surveyor shall forthwith proceed to Survey such Building or work, and shall report to the Town Council.

Town Council may pull down any works not executed in accordance with Bye Laws.

XXIX.—If any owner or person shall construct any work contrary to the Bye Laws, the Town Council after calling upon such owner or person to show cause why

the work so constructed should not be removed, altered or pulled down, may if they think fit, cause such work to be removed, altered, or pulled down as the case may require.

Penalty.

XXX.—Any person offending against any of the above Bye Laws, shall forfeit and pay for every such offence, the penalty of £5, and in case of a continuing offence, a further penalty of Forty Shillings for each day after written Notice of the offence from the Town Council.

Offences by Workmen.

XXXI.—If any workman, laborer, servant, or other person employed in or about any new work, wilfully and without the privity or consent of the Owner or person causing such work to be done, does anything in or about such work contrary to the provisions herein contained, he shall for every such offence incur a penalty of Fifty Shillings, provided nevertheless that the Justices or Court before whom any complaint shall be made for a breach of any of the foregoing Bye Laws, may if they see fit reduce the amount of penalty herein prescribed as they may deem advisable.

Schedule before referred to in the 6th Bye Law.

Minimum thickness for external and party Walls of Dwelling Houses.

Maximum height (in 2 floors), 28 feet.

8½ inches brick from base to top, 16 inches rubble masonry ground floor and 16 inches ditto upper floor, footings not less than 4½ inches wider.

APPENDIX 10

This Appendix does not contain the complete text but provides a brief resume of the requirements.

SECTIONS 124 TO 142 RELATING TO BUILDING CONTROL MATTERS

ST. HELENS IMPROVEMENT ACT 1869 (32 AND 33 VICT) CH.CXX

124. Rules as to erection etc. of dwelling houses.

125. Back yards to new buildings.

126. Buildings and dwelling houses not to be converted so as to provide dwellings in contravention of byelaws as to dwellings erected after commencement of Act.

127. Size of areas of courts, alleys etc.

128. Level of ground floor.

129. Only one storey in roof.

130. Size of rooms.

131. Elevations of buildings in front land to be subject to approval of Corporation.

132. Penalty on letting buildings contravening Act etc. which no other penalty specifically provided.

133. Waterspouts to be affixed to houses of buildings.

134. Regulations as to external walls.

135. Corporation may regulate height of chimneys.

136. Prohibition of thatch.

137. Restrictions as to pipes and funnels for conveying smoke etc.

138. Respecting existing contracts for building.

139. Alteration of contracts for building.

140. Measurement of front elevation.

141. The Corporation may make byelaws with respect to all or any of the following matters; (that is to say),

With respect to the width, level and construction of new streets and courts, and the provisions for the sewerage thereof;

With respect to the structure of the foundations and walls of new buildings with a view to the prevention of fires;

With respect to the structure of new buildings of public entertainment, for securing efficient means of egress therefrom in case of fire or accident;

With respect to the sufficiency of the space about buildings to secure a free circulation of air;

With respect to windows and the ventilation of buildings;

With respect to the drainage of buildings, and in waterclosets, privies, cess pools and ashpits in connection with buildings, and to ther situation;

Provided always that no byelaw for any of the purposes aforesaid shall affect any building, not being a new building within the meaning of this Act.

The Corporation may also make byelaws with respect to all of any of the following matters; (that is to say),

With respect to the thickness, material and construction of walls near ovens and furnaces, and of walls of ovens and furnaces not used for manufacturing;

With respect to the closing of buildings or parts of buildings unfit for human habitation, and to the prohibiting the use thereof for human habitation.

And the Corporation may provide for the observance of any byelaws made under this Section by enacting therein such provisions as they think necessary:

As to the giving of notices;

As to the deposit of plans and sections by persons intending to lay out new streets or to construct or alter buildings;

As to inspection by the Corporation;

And as to the power of the Corporation to remove, alter or pull down any work begun or done in contravention of this Act or of such byelaws;

Provided always, that no such byelaws shall apply to the construction of the new roads authorised to be made by the London and North-Western Railway Company under the powers of "The London and North-Western Railway Additional Powers Act 1866", or to any building erected or to be erected on any lands belonging to any railway company for the purposes of their undertaking.

142. If the Corporation for the space of one month after any plan or section is submitted to them for their approval neglect to notify their determination with reference thereto in writing to the person submitting the same, the Corporation shall be deemed to have approved of such plan or section.

APPENDIX 11

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BUILDING BYELAWS 1ST SERIES

(LOCAL GOVERNMENT BOARD 7TH ANNUAL REPORT, 1877/78,

APPENDIX A, PAGE 86)

The subject content of the Model Byelaws 1877 were as follows:

1. Interpretation.
2. Exempted buildings.

3-8. Related to streets.

9. Buildings not to be erected on filled sites impregnated with faecal matter.
10. Over sites - 6" concrete.
11. Walls of bricks, stone or other incombustible material - bonded with cement joints.
12. Cross wall as external walls.
13. Walls not to project over all unless arch feature.
14. Walls bonded angle.
15. Walls to rest on proper footings.
16. Walls to rest on solid ground on concrete or solid sub-structure.
17. DPCs of slate, lead, ash fault or other durable material impervious to water.
18. Heights of storeys and walls and length of walls.

19. Thickness of walls of domestic buildings.

20. Wall thicknesses of public or warehouse buildings.

21. Cross wall thicknesses.

22. Walls of stone.

23. Opening size in walls.

24. Wood frames in warehouse class.

25. Building within 15ft. of other buildings.

26. Party walls.

27. Parapets.

28. No openings in party walls.

29. No recesses in party walls.

30. Chases.

31. No wood in party walls.

32. Bressemers or joists in party walls.

33. Girders.

34. Bressemers.

35. Openings in walls.

36-52. Chimneys and flues.

53. Front open space.

54. Rear open space.

55. Sufficient number of windows.

56. Under floor ventilation.

57. One window per habitable room.

58. Rooms without fireplaces to have air brick.

59. Public buildings to be provided with adequate ventilation.

60-66. Drainage.

67-89. Privies, ashpits, W.C.s, cess pools.

90. Closing of buildings or part unfit for human habitation.

91. Details to be submitted.

92. Building plans.

93. Notices to Surveyor.

94. Notices of contravention by Surveyor.

95. Access to site for Surveyor.

96. Completion notice re. streets.

97. Completion notice re. buildings.

98. Penalties.

99. Persons receiving contravention notice may on a duly appointed day show the Local Authority why the work did not contravene or need to be pulled down. If Local Authority not satisfied the Local Authority is empowered to remove or alter or pull down the work.

APPENDIX 12

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BUILDING BYELAWS 1899 - ADDITIONAL BYELAWS THAT COULD BE MADE BY LOCAL AUTHORITIES WHO HAD ADOPTED THE PROVISIONS OF THE PUBLIC HEALTH (AMENDMENT) ACT 1890

1. Interpretation.
2. Exemption.
3. Secondary means of access (for removal of refuse - Section 23 P.H.A.A. of 1890).
4. Sizes and spans of timbers used in roofs of ordinary construction.
5. Timbers of certain roofs not within proceeding byelaws (extra strength).
6. Roof battens.
7. Laying and fixing of slates or tiles.
8. Sizes of timbers to be used in the construction of floors or ordinary construction.
9. Timber sizes used in floors not within the preceding byelaws.
10. Floors of public buildings and warehouses (7" deep x $2\frac{1}{2}$" wide timber would be permissible to span between 10-12 feet).
11. Bridging or strutting of joists.
12. Thickness of floorboards 7/8" thick or 3/4" in sleeping rooms.
13. Hearths.

14. Staircaes (required to have a minimum of 8" tread and a maximum of 9" rise be provided with a handrail, the thickness of the strings to be $1\frac{1}{4}$", thickness of tread 1" thickness of riser 3/4".

15. Staircases of public buildings and warehouses.

16. Heights of rooms 8'6" - rooms within a roof to have a room height of 9 feet of an area equal to 2/3 of the floor area measured at a height of 5 feet.

17. Paving of yards and open spaces in connection with dwelling houses.

18. Open spaces - 150 sq.ft. to be paved.

19. W.C.s provided with flushing cisterns and water supply.

20. Deposit of plans for streets.

21. For preventing buildings which have been erected in accordance with byelaws, from being altered in such a way as not to comply with those byelaws.

22. Notice of intention to alter buildings including the deposit of plans and sections.

23. Notice of commencement of work.

24. Notice to amend work (by Surveyor). Notice of completion of amendments.

25. Inspection of work in progress.

26. Inspection on completion of work.

27. Penalties of £5 and 40s a day for continuing offences.

28. Power to pull down work.

APPENDIX 13

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BUILDING BYELAWS 1ST SERIES 1899

The number and subject content of the Model byelaws were as follows:

1. Interpretation.
2.
3-8. Streets
9. Buildings not to be erected on filled sites impregnated with faecal matter.
10. Oversites to be covere with asphalt or concrete.
10a. Excavated sites.
10b. Low lying sites.
11-35. Walls - byelaw number 26 permitted party walls to be built up to the under side of the roof and the top of the wall be slated over and fire stopped with cement mortar.
36-51. Chimneys and flues.
52. Roof covering to be of non-combustible material.
52a. Roof guttering.
53. Front open space - 24 feet from building to centre of road.
54. Rear open space.
55. Windows.
56. Ventilation to underside of ground floor.
57. Windows of habitable rooms.
58. Ventilation of rooms without fireplaces.

59. Ventilation of public buildings.

60. Sub-soil drainage.

61-67. Drainage.

67. One side of W.C. to be situated on an external wall.

68. Windows of W.C. and earth closets.

69. Flushing apparatus for W.C.s.

70. Apparatus of earth closet.

71-90. Ashpits, earth closets and cess pools.

90. Closing parts of buildings unfit for human habitation.

91-97. Notices, plans, opening up of work, completion of buildings, and access - byelaw 95a stated that a person shall not let or occupany new dwelling house until inspected by officer of Council and certified fit for human habitation (this byelaw introduced certificates which became known as Habitation Certificates).

98. Penalties.

99. Removal, alteration or pulling down of faulty work.

100. Repeal of old byelaws.

APPENDIX 14

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BUILDING BYELAWS - RURAL SERIES

These byelaws were limited to the following items:

Interpretation - exempted buildings - structure of walls and foundations of new buildings for the purposes of health - over sites to be covered in concrete - D.P.C.s to be provided in walls - parapets to be coped - space to be provided about buildings - drainage - W.C.s - earth closets - privies - ash pits - cesspools - water supply to cisterns W.C.s - notices, plans and inspection of building works - alterations and additions - penalties - repeal.

There was a reprint in 1928 whereby information contained in memoranda were included in the byelaws and there was an alteration to the form of byelaw on intercepting traps. Shorter and clearer clauses were introduced with some explanatory footnotes. These amendments took into consideration suggestions from Local Authorities and professional bodies.

APPENDIX 15

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BUILDING BYELAWS SERIES 4C INTERMEDIATE

1. Interpretation of terms.

2-5. Exempted buildings (as 2-5 of the urban series).

6-12. New streets as 6-12 urban series).

13-17. With respect to the structure of walls - foundations - roofs and chimneys of new buildings, for securing stability and pre vention of fires and purposes of health - 13-17 as urban series but limited to public and domestic buildings only.

18. As 19 of the urban series.

19-21. As 20-22 of the urban series.

22. Where houses omitted - also lessens need for Local Authority to employ extra help for surveyor in applying detailed rules.

23. As 29 (urban).

24. As 31 (urban).

25. As 35 (urban).

26 and 27. As 37 and 38 (urban).

28. As 39 (urban).

29. As 43 (urban).

30 and 31. Same as 49 and 50 (urban).

32. As 52 (urban).

33-61. As 53-81 urban series.

There were reprints of the intermediate series in 1925 and 1928 which provided for alterations to houses being included as from November 1923 and the 1925 reprint provided for amendments on intercepting traps and various figures in footnotes were now included. The 1928 reprint included clauses that were re-drafted to be shorter and clearer and explanatory footnotes were added. These amendments were given following attention to observations put forward by Local Authorities and professional bodies.

APPENDIX 16

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BUILDING BYELAWS SERIES 4 URBAN - 1912

1. Interpretation.

2 Exempted buildings - added to the list of exempted buildings were buildings used for the treatment of tuberculosis and partial exemption granted for domestic outbuildings.

6-12. Relates to street byelaws.

13. New buildings or foundations of any building did not permit it on a site which has been filled with material impregnated with faecal matter, animal and vegetable matter.

14. On damp sites the whole ground surface within the external walls of the building to be properly asphalted, or covered with a layer of concrete at least 6" thick or 4" thick is properly grouted.

15. Sites which had been excavated the ground floor shall be elevated as to prevent dampness.

16. Low-lying sites, buildign site to be built up to a level related to the ordnance survey datum level.

17. External and party walls - including hollow external walls.

18. Walls to be true and plumb.

19. Return walls and piers to be bonded.

20. Foundations of walls and piers.

21. Construction of footings.

22. D.P.C.s to walls (6" above ground level).

23. Rules of measurement for walls and storeys.

24. Thickness of walls - domestic (minimum 8½" thick).

25. Thickness of walls - public and warehouse class building.

26. Thickness of cross walls 2/3 of that required by previous byelaws (minimum 8½" thick).

27. Walls of materials other than bricks (stonework to be at least 1/3 thicker than brick walls).

28. Openings in external walls.

29. Party walls to extend up to roof - slates etc. to be solidly bedded in mortar or cement on top of the wall.

30. Parapets to external walls of certain buildings.

31. Parapets to be coped.

32. No openings in party walls.

33. Recesses in external and party walls.

34. Chases in walls (maximum 4" deep, maximum 14" wide in 8½" wall - 13½" from other chases and 13½" from return walls).

35. Timber in party walls.

36. Templates under bressummers.

37. Materials for chimneys.

38. Construction of chimneys.

39. Chimney flues to be parged inside.

40. Outside of flues to be rendered (where less than 8½" thick).

41. Brickwork about certain flues to extra thick.

42. The support of chimney breast above opening.

43. Jambs of chimney openings (8½" wide).

44. Thickness of brickwork about chimney flues (minimum 4" thick).

45. Thickness of chimney backs (4½" and 8½" thick).

46. Thickness of brickwork in certain flues (not less than 45° 8½" thick).

47. Minimum height of chimneys above roof (3 feet).

48. Maximum height of chimneys (6 times width).

49. Metal joist holders not nearer to flues than 2".

50. Timber not to be nearer to flues that 9".

51. Face of certain brickwork about chimneys to be rendered (2" from any timber).

52. Openings in chimneys.

53. Roof covering (allows use of combustible material if building is twice its height away from boundary).

54. Open space in front of new buildings (minimum 24 feet).

55. Open space at rear of new buildings (minimum area of 150 sq.ft. at a depth of 15 feet where the height of the building is less than 25 feet - 20 feet where the building height is less than 35 feet and 25 feet where the building height is less than 50 feet).

56. Windows to be provided.

57. Ventilation of space beneath lowest floor.

58. Windows to habitable rooms to be of a size equal to 1/10th of the floor area half of which shall be capable of being opened.

59. Ventilation of rooms without fireplaces (provision of air bricks to give ventilation area of 100 sq.ins.)

60. Drainage of sub-soil.

61. Drainage materials.

62. Drains to be trapped from the sewer.

63. Ventilation of drains.

64. No drainage inlet within buildings.

65. W.C.s.

66. Earth closets.

67. Ashpits.

68. Movable ashpits.

69 and 70. Cess pools.

71. Existing buildings - ashpits, W.C.s, privies and cess pools.

72. Water supply for W.C. cistern.

73. Notice and plan of new streets.

74. Notice and plan etc. of intended new building.

75. Notices etc. (24 hours' notice in writing at commencement, covering up sewer, drain, foundation and D.P.C. - provisions to serve notice to open up - notice to be given of completion of alterations or amendments - Surveyor to have access to building - notice of completion.

76. Surveyors assistants to have access to building works.

77. Alterations and extensions to buildings.

78. Penalties.

79. Work done in contravention of byelaws may be removed, altered or pulled down.

80. Repeal of previous byelaws.

APPENDIX 17

This Appendix does not contain the complete text but provides a brief resume of the requirements.

MODEL BYELAWS - ISSUED FROM THE MINISTRY OF HEALTH - XVIII - MEANS OF ESCAPE FROM FIRE IN CERTAIN FACTORIES AND WORKSHOPS - 1935

The Factory and Workshop Act of 1901 (Section 15) empowered Town Councils, Urban District Councils and Rural District Councils to make byelaws providing for means of escape from fire in factories and workshops. Section 14 of that Act dealt with factories and workshops in which more than 40 persons were employed therefore the model byelaws were confined to factories and workshops in which not more than 40 persons were employed. The Act also required that the means of escape from fire provided in compliance with the byelaws were to be maintained in good condition and free from obstruction.

Byelaws

1. Interpretation.
2. Byelaws not to apply to any factory or workshop in which more than 40 persons were employed.
3. Rules relating to the construction of a new building or alteration in form or structure of an existing building. (a) An adequate staircase or flight of stairs. (b) Staircase to be constructed of incombustible fire resisting material. (c) Where more than 10 persons were employed or readily inflammable materials or explosives are stored or used, an external staircase be provided,

or similar external means of escape or access to the roof and to the roof of the adjoining building. (d) Rooms in which persons are habitually employed which is above the ground storey or on the ground storey and there is not direct and unimpeded access to open space on the outside of the building that room shall have at least 1 window or other means of exit from the building. (e) Windows or other means of exits shall be distinctively marked. (f) Window or door or other means of access to any external sttaircase or flight of stairs shall be distinctively marked.

4. Persons not to begin to use building as a factory or workshop until it has been adapted to comply with the rules.

5. Owner of a building which is used as a factory or workshop at the date of the confirmation of the byelaws shall execute all works as necesasry to make the factory or workshop comply.

6. Penalties.

7. Repeal of previous byelaws.

APPENDIX 18

This Appendix does not contain the complete text but provides a brief resume of the requirements.

THE PUBLIC HEALTH ACT 1936 (26 GEO.5.1.EDQ.8,C.49) SECTIONS OF THE ACT, IN ADDITION TO SECTION 64, WHICH ENABLED LOCAL AUTHORITIES TO REFUSE, OR CONDITIONALLY APPROVE DEPOSITED PLAN.

1. Section 25. Plans that indicate a building or extension would be built over a public sewer. Approval could be given and the Local Authority could impose conditions. This power is a consolidation of the powers of Section 26, Public Health Act 1875 which was applicable to urban areas and had been extended to other areas in 1931.

2. Section 43. Plans that do not show satisfactory sanitary closet accommodation consisting of one or more water or earth closets as the Local Authority may require unless they are satisfied that they may properly dispense with this requirement. This Section replaces Section 35 of the Act which was later amended by the 1907 Act.

3. Section 53. Plans of a building which show that a building will be constructed using materials which are short lived or unsuitable for permanent construction. This Section is new in form and substance but based on Section 27 of the Public Health Act 1907 and similar provisions in local Acts. This Section provided Local Authorities

with the control over temporary type buildings by either refusing the plans or using a discretion to approve fixing conditions in a time limit as to the use of the building may be put.

4. Section 54. Refusal of plans showing a building to be erected on land which had been filled with faecal or animal or offensive material unless the Local Authority is satisfied that the material in question has been rendered innocuous. This Section replaced Section 25 of the Public Health Act 1890 which gave independent control not related to the deposited plans. This provision could be adopted by rural authorities. In addition, the Ministry Model Byelaws of the 1935 addition contained a similar provision which could be adopted in areas where Section 25 of the 1890 Act was not enforced.

5. Section 55. Plans of a house or extension to a house that did not show satisfactory means for the removal of refuse and faecal matter would be provided. This Section did not apply to houses that had been approved by the Minister in respect of housing operations to which Section 99 of the Housing Act 1925 applied, being Local Authority Housing or Housing Association or Trust Development. Another example of a provision exempting Local Authority Housing from building control. Some Local Authorities had made byelaws in rspect of refuse removal underr the Public Health Act 1890 but these were now repealed.

6. Section 59. Plans which did not show that buildings or extensions to buildings would have satisfactory entrances and exits,

passageways and gangways could be refused. This Section applied to buildings used for public purposes being a theatre or hall of public resort, restaurant, shop, store or warehouse, which members of the public is admitted and where more than 20 persons are employed, and clubs required to be registered under the Licencing (Consolidation) Act 1910, schools not exempt from the building byelaws, and churches, chapels or other place of public worship. The provisions of this Section could be applied to existing buildings. This Section replaced Section 36 of the Public Health (Amendment) Act of 1890, where the provisions of this Act could be applied independently but did not relate to the deposit of plans. Furthermore the provision did not apply to rural districts although those districts could adopt the section. It could also have been put in force in a rural authority by order of the Ministry of Health. To some extent, this provision did also accommodate some of the views expressed by the Royal Commission of Fire Brigades and Fire Prevention.

7. Section 137. Where plans did not show that a house would be provided with a supply of wholesome water sufficient for domestic purposes they could be refused. This Section was a new provision based upon Section 6 of the Public Health (Water) Act of 1878, but unlike that Section this provision extended to urban and rural areas.

APPENDIX 19

This Appendix does not contain the complete text but provides a brief resume of the requirements.

LEGISLATIVE GROWTH OF BUILDING BYELAW POWERS

Local Government Act 1858. Section 34.

(i) Structure of walls of new buildings for securing stability and prevention of fires.

(ii) Space about buildings as to secure a free circulation of air and with respect to ventilation of buildings.

(iii) Drainage of buildings, W.C.s, privies, ashpits and cess pools.

(iv) Giving of notices, deposit of plans, inspection of work.

* * *

Public Health Act 1874

Extended to walls, roofs, foundations and water spouts for purposes of health.

* * *

Public Health Act 1875

As above, but extended to cover chimneys.

* * *

Public Health (Amendment) Act 1890

Extended to cover floors, hearths, staircases and height of rooms, water supply to W.C.s.

* * *

Public Health Act 1936

(i) Construction of buildings including materials

(ii) Space - lighting and ventilation

(iii) Height of buildings, chimneys

(iv) Sanitary conveniences and drainage of buildings

(v) Wells etc.

(vi) Sewers

(vii) Stoves etc.

(viii) Existing buildings

(ix) Change of use

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